

Environmental Assessment

for

**Conner N&S
F-NH 7-1 (41) 16 F
UPN 1281**

in

Ravalli County, Montana

Prepared for:

**Federal Highway Administration
and
Montana Department of Transportation**

Prepared by:

Carter  Burgess

February 2004

Environmental Assessment

for

Conner North & South

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Ravalli County, Montana

This document is prepared in conformance with the Montana Environmental Policy Act (MEPA) requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the National Environmental Policy Act (NEPA) requirements for an Environmental Assessment under 23CFR 771.119.

Submitted Pursuant to 42 USC 4332(2)(c) 49 USC 303 and
Sections 2-3-104, 75-1-201 MCA

by the

U.S. Department of Transportation

Federal Highway Administration

and the

Montana Department of Transportation

Submitted By:

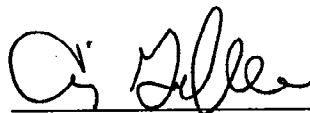
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for Montana Department of Transportation

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ACRONYMS

| | |
|--------|--|
| AASHTO | American Association of State Highway Transportation Officials |
| ADT | Average Daily Traffic |
| BMP | Best Management Practices |
| BRR | Biological Resources Report |
| CEQ | Council on Environmental Quality |
| CFR | Code of Federal Regulations |
| Corps | United States Army Corps of Engineers |
| CSKT | Confederated Salish and Kootenai Tribes |
| DEQ | Department of Environmental Quality |
| EA | Environmental Assessment |
| EIS | Environmental Impact Statement |
| EO | Executive Order |
| EPA | Environmental Protection Agency |
| ESA | Endangered Species Act |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| LOS | Level of Service |
| MDT | Montana Department of Transportation |
| MEPA | Montana Environmental Policy Act |
| MFWP | Montana Fish, Wildlife, & Parks |
| MNHP | Montana National Heritage Program |
| MOA | Memorandum of Agreement |
| NAC | Noise Abatement Criteria |
| NEPA | National Environmental Policy Act |
| NHS | National Highway System |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| PTW | Present Traveled Way |
| RP | Reference Post |
| ROW | Right-of-Way |
| SHPO | State Historic Preservation Officer |
| TMDL | Total Maximum Daily Load |
| USFWS | United States Fish and Wildlife Service |

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EXECUTIVE SUMMARY

The Montana Department of Transportation (MDT), in conjunction with the Federal Highway Administration (FHWA), proposes to reconstruct US 93 to rural National Highway System (NHS) route standards for mountainous terrain, along its current alignment between Reference Posts (RP) 16.24 and 23.24 near Conner. The NHS standards and reconstruction include a 40-foot two-lane undivided roadway with shoulders. The termini of the project were determined to include a portion of US 93 (between RP 23.24 and RP 25.88) that had previously been reconstructed. This area will be resurfaced to include widened shoulders to provide a consistent pavement width. One exception to the proposed typical roadway width is a curb and gutter section with narrower shoulders in the Medicine Tree area to minimize roadway impacts to the culturally significant site.

The project is located in Ravalli County in southwestern Montana. The surrounding land uses are low-density rural residential, agricultural land and mountainous National Forest System lands. The corridor runs through the Bitterroot National Forest and is adjacent to the East Fork Bitterroot River.

The primary purpose and need for the project is to improve the operational characteristics, safety and physical conditions of the existing highway facility. Reconstructing the roadway is necessary to bring it to National Highway System (NHS) standards. In addition, adjacent sections of US 93 have been reconstructed to the NHS standard for this route, which are a 40-foot or greater roadway width and 50 mph design speed.

The Preferred Alternative consists of two 12-foot travel lanes with 8-foot shoulders. The current roadway width is approximately 24 feet, consisting of two 12-foot travel lanes with little to no shoulders. In the area near the Medicine Tree the proposed typical cross section includes two 12-foot lanes and narrower shoulders and curb and gutter with guardrail.

The environmental impacts and mitigation measures associated with this project are discussed in Chapter 3.0. The primary impacts are listed below:

- **Right-of-way:** Based on conceptual design, direct conversion of land for highway right-of-way is estimated to be approximately 63 acres. Some utility relocation may be required.
- **Water Resources and Water Quality:** Some roadway widening occurs adjacent to the East Fork Bitterroot River. Roadway maintenance and construction activity affect water quality conditions.
- **Wetlands:** Approximately 6 acres of wetlands are estimated to be impacted by the proposed action.
- **Floodplains:** Some impacts occur to the East Fork Bitterroot River floodplain. This project will comply with Ravalli County's floodplain regulations and Executive Order 11988.
- **Threatened or Endangered Species:** The following effect determinations have been made: Grizzly Bear—**no affect**; bull trout—**may affect, likely to adversely affect**; Bald eagle, gray wolf and Canada lynx—**may affect, not likely to adversely affect**. Formal

consultation with the U.S. Fish and Wildlife Service has been initiated for the bull trout and Canada lynx. A decision document will not be signed prior to receiving the biological opinion.

- **Cultural Resources: No effect** determinations have been made for the Whitesell Irrigation Ditch Flume, Joe's Bitterroot Ranch (a.k.a. Rocky Knob Lodge), and Medicine Tree. A privacy wall has been coordinated with the Confederated Salish and Kootenai Tribes to protect this culturally important site.
- **Section 4(f).** No Section 4(f) impacts.

1.0 PURPOSE AND NEED FOR ACTION

1.1 Study Area Description and Location

The study area is located on US 93 in Ravalli County, Montana (See **Figure 1-1**). The 9.6-mile project begins about 16 miles north of the Montana/ Idaho border at Reference Post (RP) 16.24 and extends northerly to Reference Post 25.88 near Conner as shown in **Figure 1-2**. The project is located within the following Township, Range, and Sections of the Montana Principal Meridian (MPM):

- Township 1 North, Range 20 West, Sections 1 and 2.
- Township 2 North, Range 20 West, Sections 16, 17, 21, 22, 27, 34, and 35.

The study area is a major north-south corridor that traverses a variety of landscapes: mountainous terrain, National Forest System land, low-density rural residential, agricultural land, and river and riparian habitat. The project parallels the East Fork Bitterroot River through much of the corridor. The corridor runs through the Bitterroot National Forest and an area that suffered extensive damage in the forest fires of summer 2000.

1.2 Existing Road Description

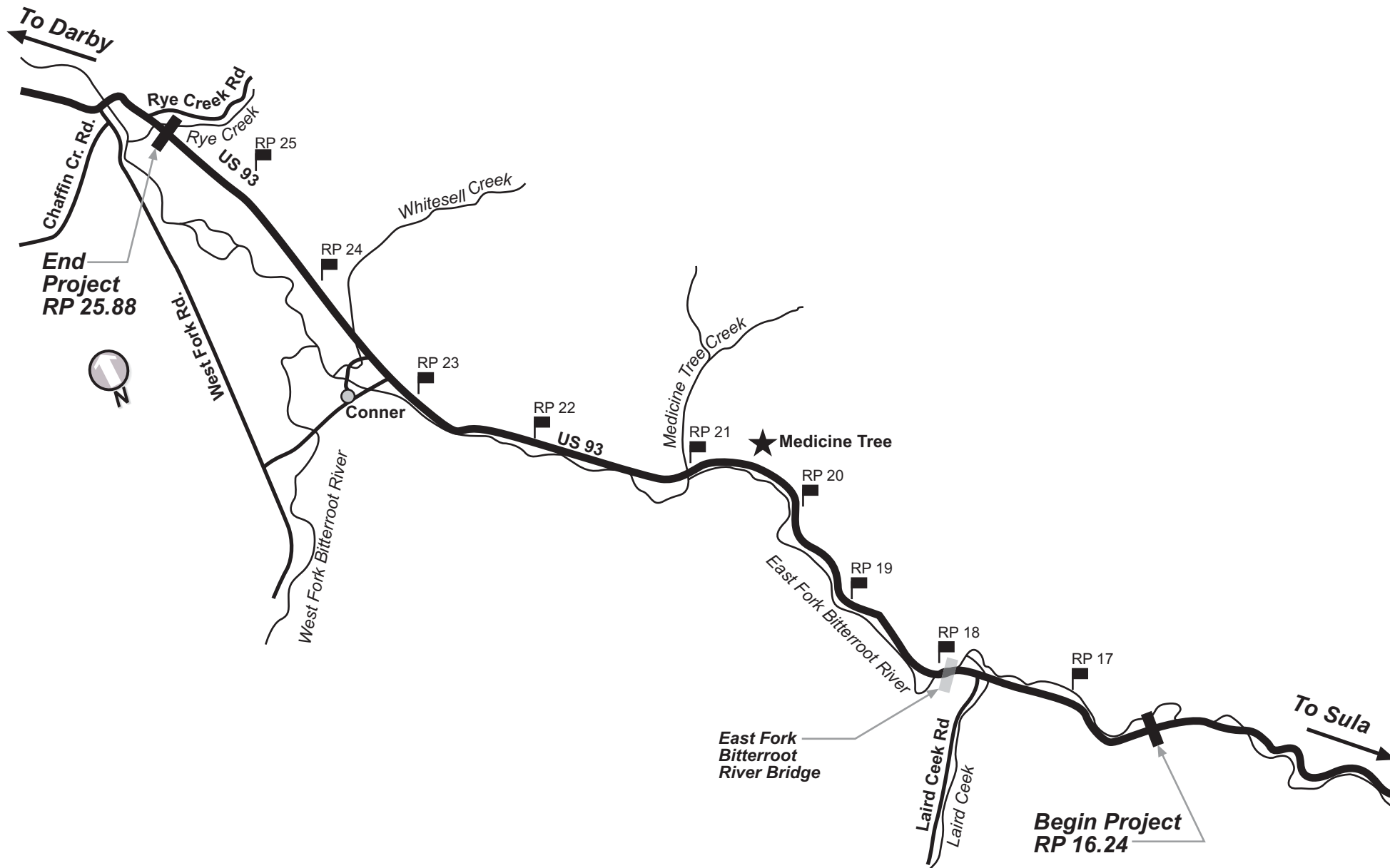
US 93 is an important transportation corridor for locals, tourists and commercial vehicles. It is a primary link from southern Idaho, through Western Montana, to British Columbia, Canada (see **Figure 1-1**). The corridor provides many accesses to private residences and is also used to transport agricultural and timber products. It is a vital element contributing to the local and regional economy. Bicyclists commonly use this section of US 93 during the warmer months and this is expected to continue.

US 93 is classified as a principal arterial and is a part of the National Highway System (NHS). The majority of the project corridor is very narrow due to the adjacent river on one side and mountainous slopes on the other side. As part of current access management, it is designated a limited access facility.

The existing facility within the study area is a rural two-lane highway with a 24-foot paved surface with little or no shoulder (see Existing Typical Section, Figure 1-3) that is considerably narrower than the 40-foot design standard for this NHS highway. The original facility was constructed in 1936 and 1937 under the Forest Highway Program with improvements in 1939. This 65-year old highway is cracking, has inconsistent surface due to patching and has minimal shoulders. The existing horizontal alignment includes sixteen horizontal curves, four of which do not meet the 50 mph design speed. The vertical alignment includes nineteen curves that all meet the stopping sight distance for the 50 mph design speed, which is a MDT standard.

There is one bridge on US 93 located within the study area at RP 18.1 and the location is shown on **Figure 1-2**. The bridge is a three-span steel and girder floor beam type structure that spans the East Fork Bitterroot River. It was built in 1937, is 130 feet in length and carries the 24-foot





conner
NORTH & SOUTH

Study Area

Figure 1-2

roadway. The bridge has a structural sufficiency rating of 46.7 (on a 100-point scale). The Sufficiency Rating is a composite of several ratings of individual bridge items that rate the structural condition and geometry of the bridge. Additionally, a bridge with low ratings on the structural condition items will be designated structurally deficient, and a bridge with poor ratings for geometry items will be designated as functionally obsolete. The MDT Bridge Bureau's *Inventory and Structural Sufficiency Rating* lists any bridge rating of less than 50 as being structurally deficient and eligible for replacement.

1.3 Proposed Action

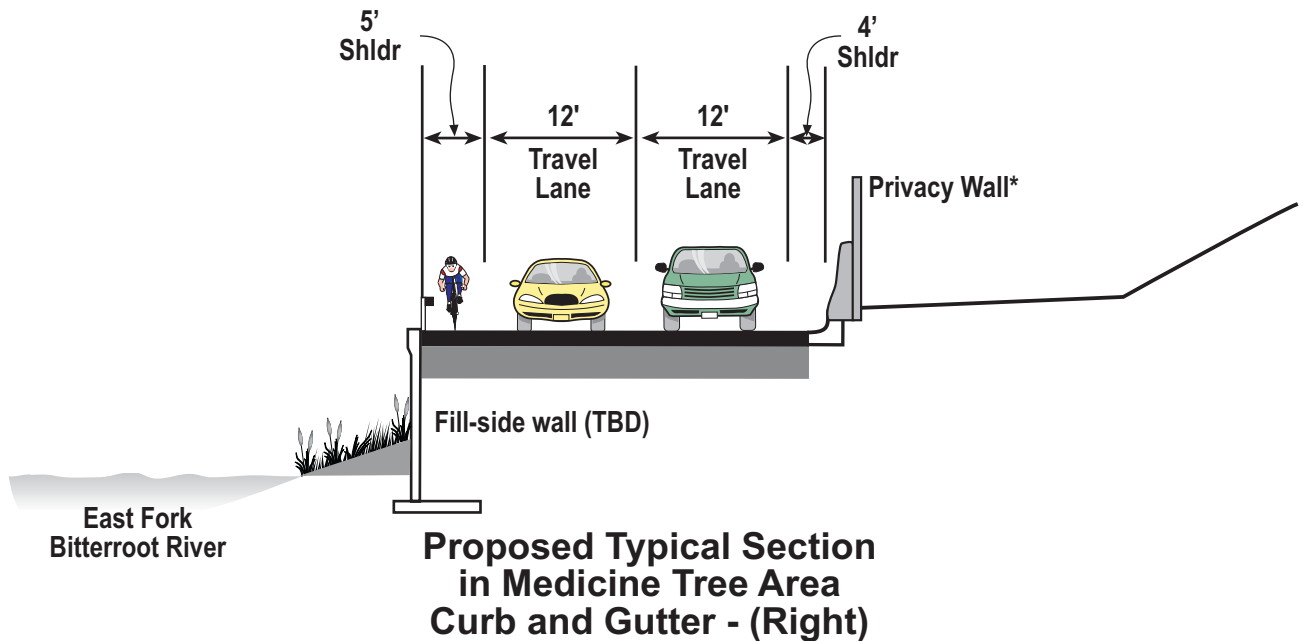
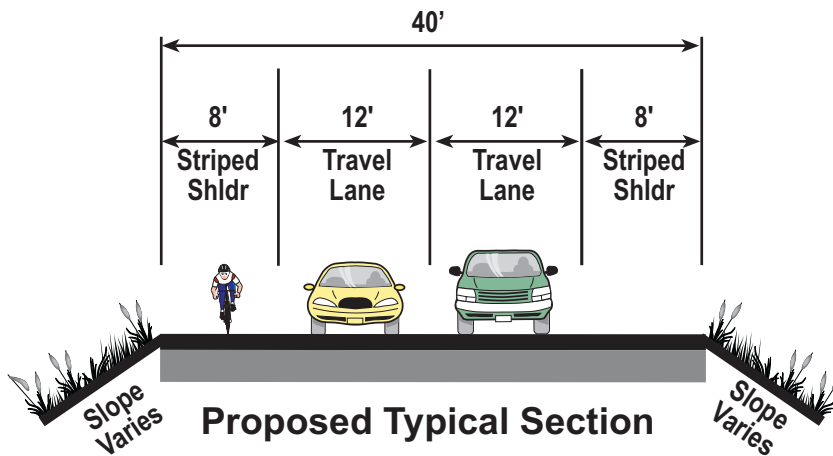
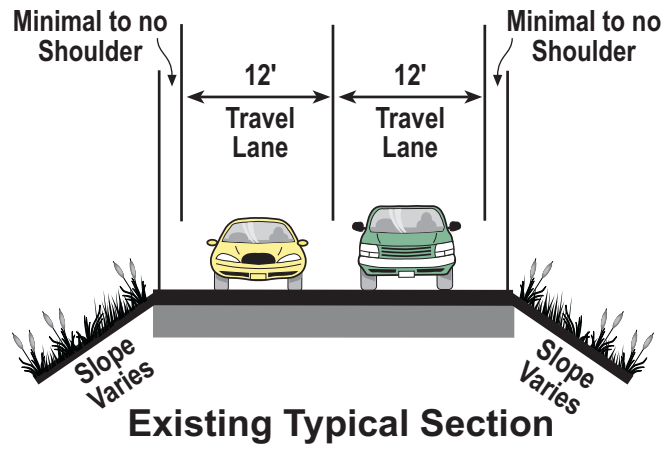
The Montana Department of Transportation (MDT) in conjunction with the Federal Highway Administration (FHWA) proposes to reconstruct US 93 between RP 16.24 and RP 23.24. The project corridor between RP 23.24 and RP 25.88 is proposed to include resurfacing and widened shoulders but not reconstruction. The existing and proposed typical sections are shown in **Figure 1-3**. In the Medicine Tree area (RP 20.5) a curb and gutter section is proposed to minimize impacts to the Medicine Tree (see Medicine Tree Typical Section, **Figure 1-3**). The proposed action is depicted in **Figure 1-4**. The proposed action would reconstruct the present traveled way (PTW) primarily along the existing alignment. The East Fork Bitterroot River Bridge (RP 18.1) would be replaced with a new bridge capable of accommodating a 40-foot roadway.

The roadway will generally be widened away from the East Fork Bitterroot River. In the area of the Medicine Tree (RP 20.5), the roadway is offset towards the river to provide a buffer along the Medicine Tree property. The turnout for the Medicine Tree at RP 20.5 will be perpetuated. A privacy wall is proposed along the Medicine Tree property to provide screening and protection from the highway (see **Figure 1-3** and **Figure 2-2**).

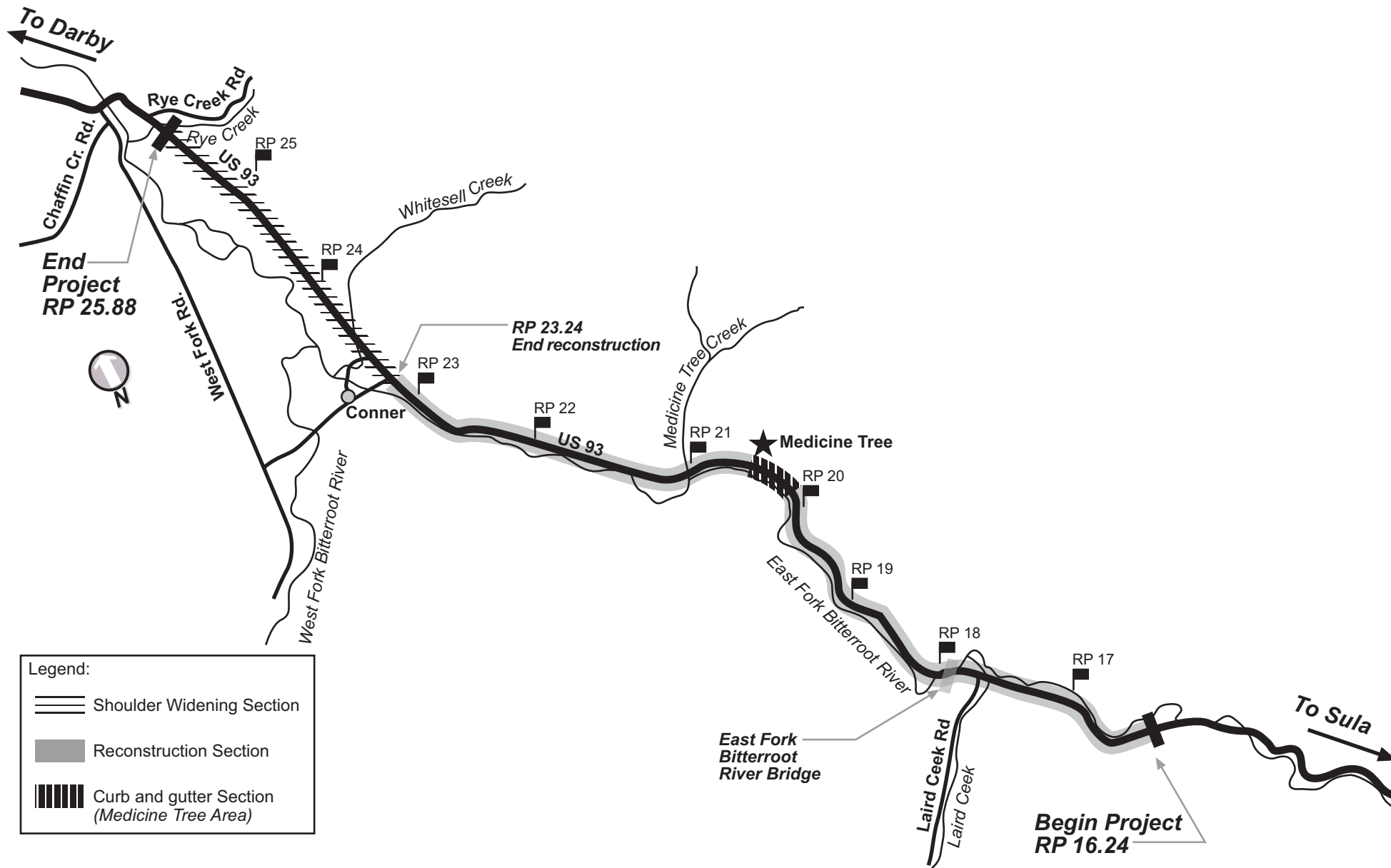
The proposed action does not have as an objective the intent to induce population growth, economic development, or increased traffic. The proposed project would reconstruct the existing two-lane highway with a new two-lane highway that has improved alignment and grades within the current highway corridor. Highway design, using appropriate widths for traffic lanes, shoulders, recovery areas and rights-of-way are included to meet NHS standards. Reconstruction will also include bridge replacement, fill-side walls, grading, slope flattening, drainage, signing, pavement markings, revegetation, fencing, mailbox replacement, access control, approaches, and necessary utility relocation. To the extent feasible, the widened roadway will generally be projected away from the river to avoid encroachment into environmentally sensitive areas along the river.

The proposed roadway is intended to meet design guidelines and standards to provide needed improvements in safety and operation for the traveling public. It may be appropriate, where substantial environmental effects may occur, where construction costs may be excessive, or where otherwise impractical, to consider highway designs that do not meet the desired standards.

In areas where the roadway embankment would encroach into the river or floodplain, fill-side walls and other measures have been proposed to avoid and minimize impacts to the river ecosystem. Most walls will be outside/above the floodplain.



* Proposed privacy wall for Medicine Tree



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Preferred Alternative

Figure 1-4

The portion of the project corridor between RP 23.24 and RP 25.88 was previously reconstructed to accommodate a future 40-foot paved surface consistent with the remainder of the project corridor. The primary purpose of this work is to meet NHS standards and provide continuity with wider shoulders.

MDT has completed environmental analyses for other projects on US 93 as connected actions. The Darby-South project (F 7-1 (36) 23) was completed in 1991 and Sula-North (F 7-1 (58) 9) was completed in 2002. These projects have not caused other actions that required an Environmental Impact Statement (EIS). The projects proceeded independently. They were not dependent on other actions, and they were not an interdependent part of a larger action (40 CFR 1508.25).

1.4 Purpose and Need

The primary purpose and need for the proposed action is to improve the operational characteristics, safety and physical conditions of the existing highway facility. Reconstructing the PTW is necessary to improve the roadway conditions to current NHS standards.

1.4.1 ROADWAY DEFICIENCIES

One need for the project is to correct roadway deficiencies. The existing roadway has many deficiencies when compared to NHS standards for a rural NHS route in mountainous terrain that affect its ability to safely carry a growing number of vehicles, such as:

- **Inadequate Shoulder Width.** For much of the corridor the shoulder widths are one foot or less. The standard shoulder width for highways of this functional classification is typically eight feet. An eight-foot width allows for a stalled vehicle to be parked on the shoulder and be clear of the traffic lane. The current lack of shoulders causes a safety hazard when there is no opportunity for vehicles to pull over from overheating or other mechanical problems, or for maintenance vehicles and operations. A design exception in the Medicine Tree area has been recommended to avoid and minimize impacts to the Medicine Tree and East Fork Bitterroot River.
- **Horizontal and Vertical Alignment.** The existing horizontal alignment includes sixteen horizontal curves that do not meet the MDT design criteria for a design speed of 50 mph. Some curves create hazardous driving conditions, such as limited sight distance and few passing opportunities, which could cause motorists to lose control and drive off the roadway. Much of the project is in mountainous terrain with steep side slopes, creating at times a dangerous situation.

The existing vertical alignment includes nineteen curves that all meet the minimum stopping sight distance for a 50 mph design speed throughout the project corridor.

- **Pavement Deficiencies.** The existing pavement is a deteriorated bituminous treated surface with a width of 24 feet. The paved surface throughout the project exhibits severe deterioration and is in need of repaving. The pavement has a substantial amount of distortion and is subject to severe frost heaves during spring thaw. Reconstructing the

roadway and new pavement will be more cost effective over the long term than continuing to maintain the existing roadway.

- **Local Access Geometry.** Most local access turnouts along the corridor are gravel or dirt roads and some have bridge access that cross the East Fork Bitterroot River. Many access turnouts have substandard or inadequate turning and/or stopping distances, causing unexpected or sometimes dangerous turning movements. US 93 is designated a limited access facility and as such has design criteria established to control access onto the highway.
- **Access to Recreation Activities.** US 93 provides access to many recreational activities within the Bitterroot National Forest and along the project corridor such as:
 - ◇ Fishing
 - ◇ Picnicking
 - ◇ Site seeing
 - ◇ Hunting
 - ◇ Snowmobiling
 - ◇ Hiking
 - ◇ Camping
 - ◇ Wildlife viewing
 - ◇ Bicycling
 - ◇ Skiing

These recreational highway users would benefit by safer driving conditions and improved shoulder/clear zone features and passing opportunities.

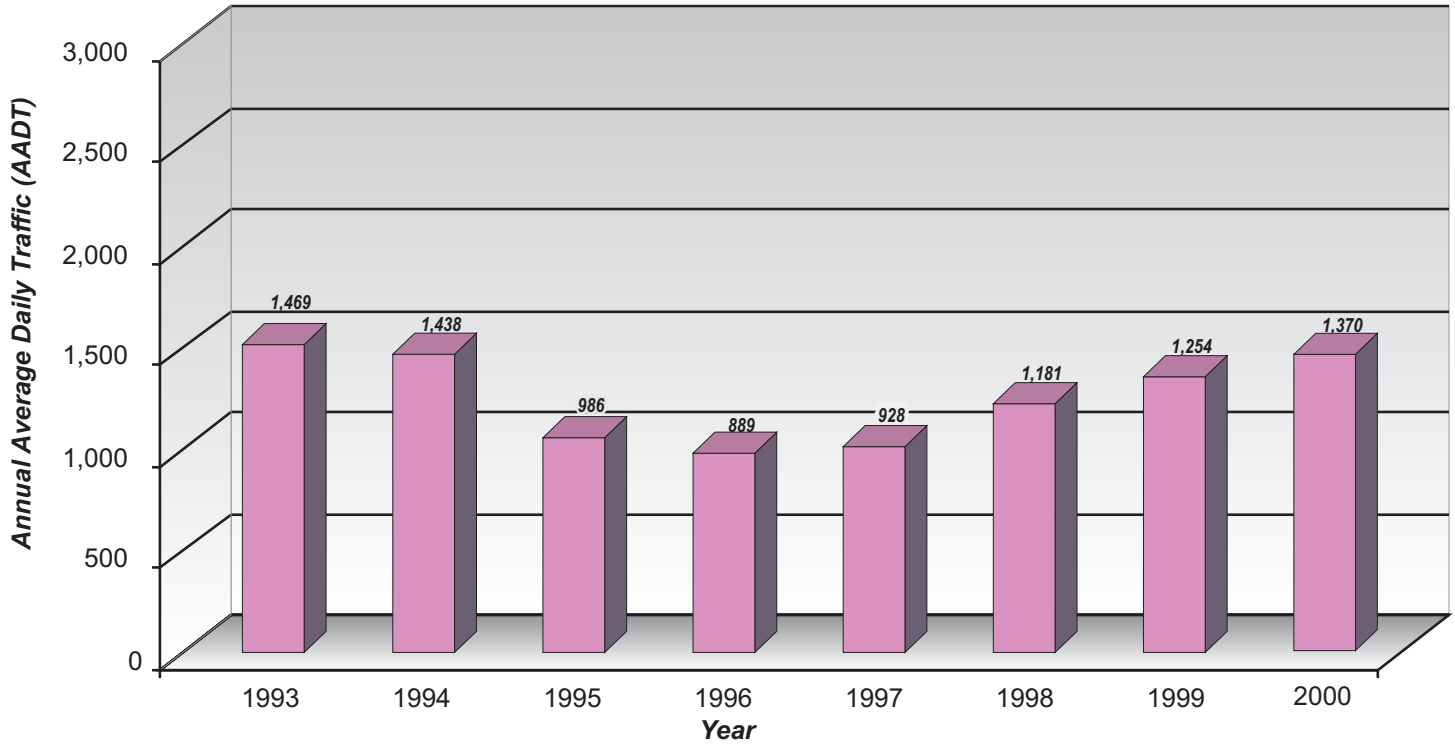
1.4.2 TRAFFIC VOLUMES AND CHARACTERISTICS

US 93 is a NHS route with heavy local, tourist and truck traffic. The yearly traffic volumes on US 93 from 1993 to 1999 are depicted in **Figure 1-5**. According to the most recent traffic studies, 1,370 vehicles was the 2000 Average Daily Traffic (ADT) on US 93. Traffic volumes are projected to reach 2,200 in the 2024 design year for highway improvements, representing a 60 percent increase in traffic predicted over the next twenty years.

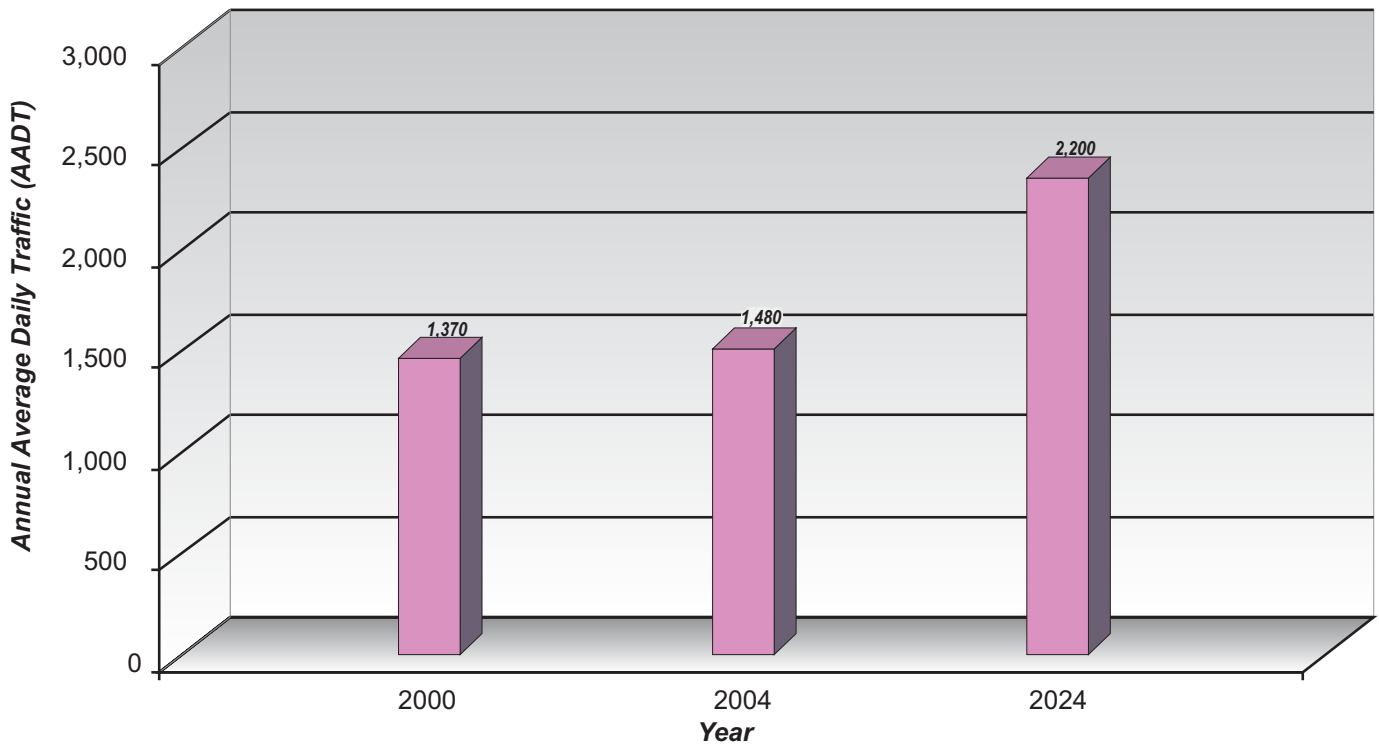
Currently, much of this corridor is not available for passing. As volumes increase in the future, the ability for vehicles to pass will become more restricted, increasing delay and bottlenecks. The Level-of-Service (LOS) is a rating of traffic operating conditions that is calculated by comparing traffic volumes to available capacity along a roadway. **Figure 1-6** depicts varying degrees of roadway operating characteristics for mountainous driving conditions. LOS A is rated as the best (free flow), while LOS F is the worst (forced/delayed flow). MDT has established guidelines for LOS for principal arterials. In the design year (2024) a principal arterial in rolling terrain should provide LOS B. In mountainous terrain, LOS C should be provided. The capacity analysis for the project corridor in the design year predicted a LOS C, close to LOS D. The No-Action Alternative would likely result in LOS D or lower in the future design year, due primarily to the substantially higher traffic volumes and deficient geometric conditions.

Future LOS with the Preferred Alternative is expected to be better than the No-Action Alternative for the year 2024 due to standard shoulder widths allowing slow-moving vehicles space to pull over as needed.

Historical Annual Average Daily Traffic (AADT) Volumes

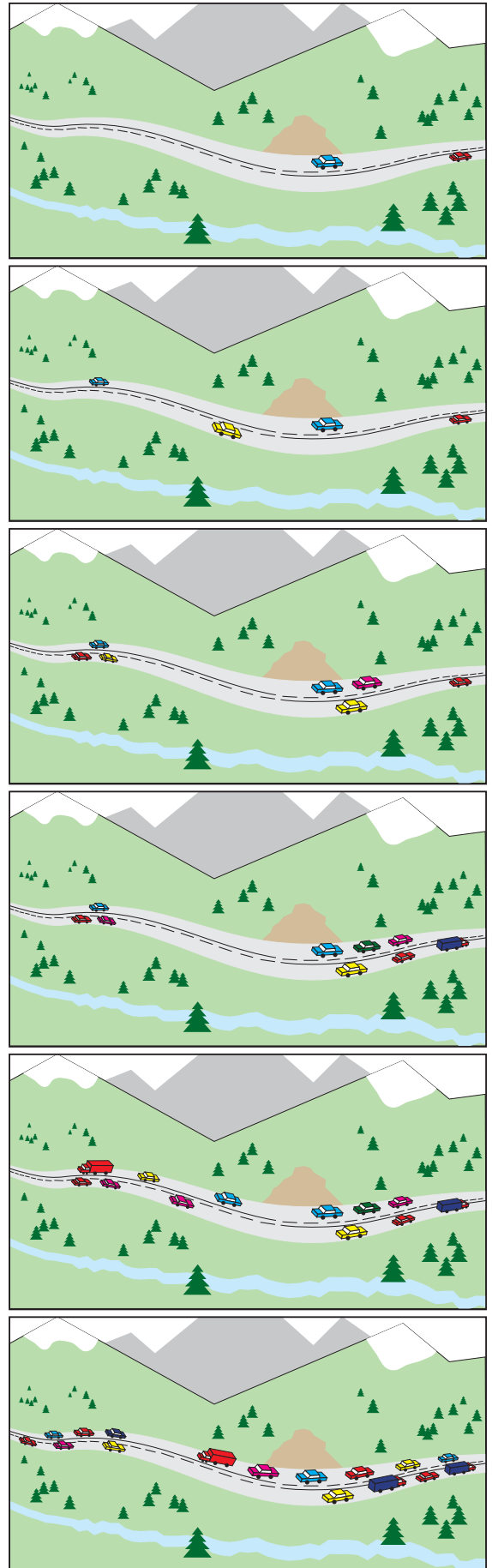


Annual Average Daily Traffic (AADT) Volumes Predicted



LOS Roadway Segment Operating Characteristics

- A** Free flow, low traffic density, passing demand well below passing capacity, no platoons of three or more vehicles, drivers delayed less than 30% of time by slow moving vehicles.
- B** Minimum delay, stable traffic flow, passing demand equals passing capacity, drivers delayed up to 45% of time by slow moving vehicles.
- C** Stable condition, movements somewhat restricted due to higher volumes, but not objectionable for motorists, noticeable increases in platoon formation, size, and frequency, percent time delays up to 60%. **Goal for project design year.**
- D** Movements more restricted, passing demand is very high while passing capacity approaches zero, platoon sizes of 5 to 10 vehicles are common, turning vehicles cause “shock-waves” in traffic stream, percent time delays approach 75%.
- E** Actual capacity of the roadway, involves delay to over 75% of motorists, passing is virtually impossible, platooning becomes intense.
- F** Forced flow with demand volumes greater than capacity resulting in severe congestion, no passing opportunities and long platoons.



There are many types of vehicles that currently use US 93. The corridor serves local traffic as well as recreational vehicles in the summer and winter since the area draws many tourists seeking the great outdoor amenities the area offers. US 93 is also used by commercial vehicles since the corridor is a main north-south interstate route. Logging near the study area requires that the roadway accommodate large trucks to haul logs. Commercial and tractor trucks make up approximately ten percent of the average traffic.

1.4.3 SAFETY

Analysis of the past ten years of accident data for the 9.6-mile section of US 93 identified several deficiencies in the present highway. If corrective improvements are not implemented and traffic volumes continue to increase as projected, it is likely that the rate and severity of accidents will increase.

The physical features of US 93, such as road profile and cross-section, access characteristics, and horizontal and vertical curvature conditions, affect safety by influencing the ability of the driver to maintain vehicle control. Some factors, such as vehicle characteristics, have changed over the years to redefine the relationship between safety and road design so that previously acceptable design (1930s) is now outdated. Design improvements along US 93 can reduce accident rates and the severity of accidents.

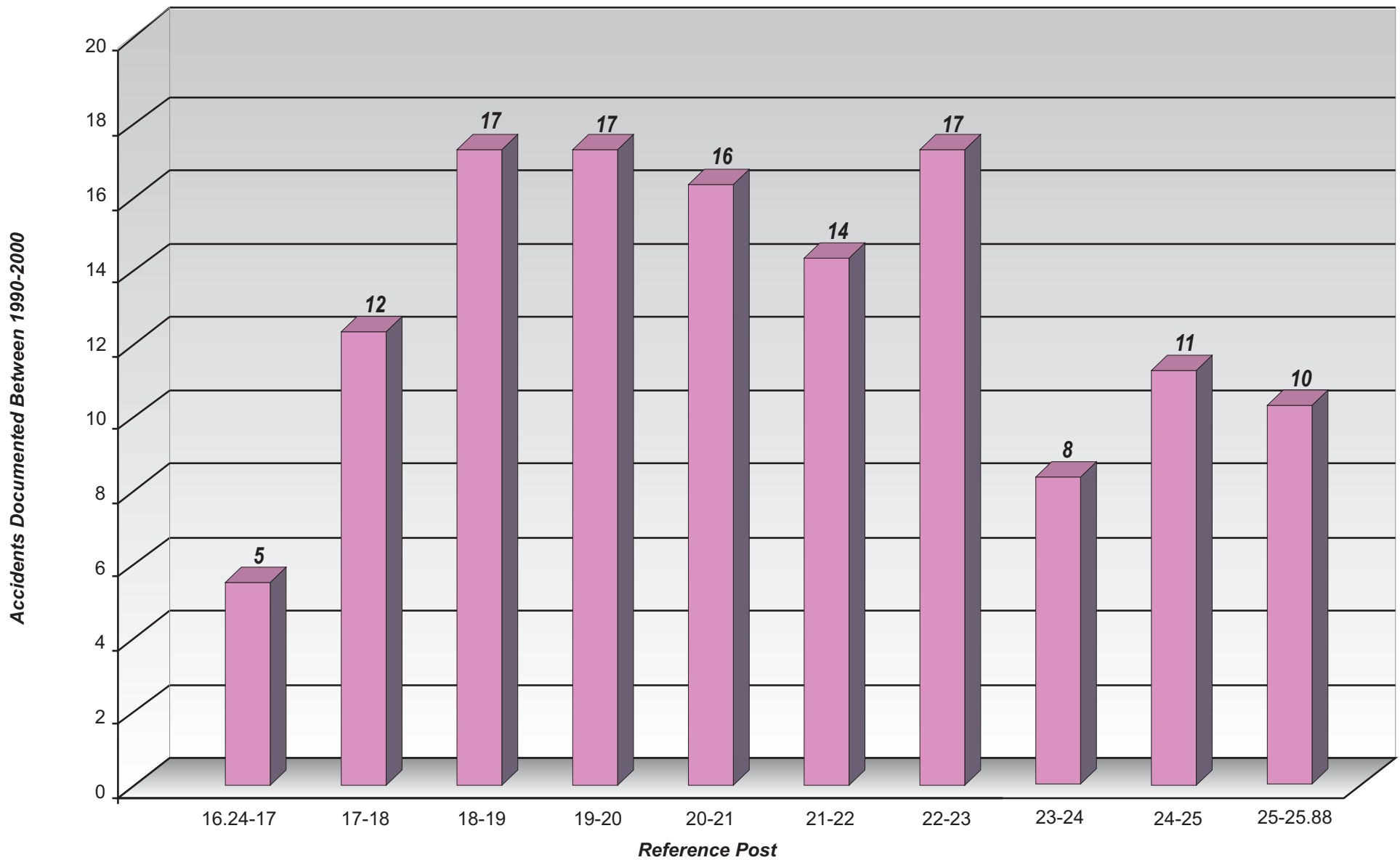
During the period 1990 to 2000, there were 126 accidents, which occurred on this section of US 93. **Figure 1-7** identifies the accidents per reference post for the years 1990 to 2000. Of these, 47 accidents included injuries. There was one fatality. Approximately 30 percent of the accidents occurred during wet, snowy, or icy road conditions. The majority (86.5 percent) of accidents involved only one vehicle.

To evaluate accident data, an accident rate and severity index are used. An accident rate is defined as accidents per million vehicle miles traveled. The accident rate for this section of US 93 for the years 1990 to 2000 is 2.68 accidents per million vehicle miles (mvm). The statewide average for rural highways over this same time period is 1.30 accidents per million vehicle miles. An area is considered to be a safety problem if it exceeds the statewide accident rate.

The statewide average severity index for a rural highway is 2.39 accident per mvm. The severity index accounts for the different degree of severity among accidents involving fatalities, injuries and property damage. The study area severity index is 2.48 accidents per mvm.

- Wild animals were involved in 37 of the accidents or 29 percent of the total.
- Over half of the accidents resulted in the vehicle leaving the road and hitting rocks/boulders, trees, embankment, signposts or other fixed objects. Adequate clear zone design is essential to address this issue.

Several accident clusters were identified within the project corridor between RP 16 and RP 21. Safety measures are included in this project.



The project will increase sight distance and widen shoulders, giving motorists the opportunity to avoid collisions. These improvements will bring this section of US 93 up to NHS standards and, thereby, reducing the accident rate.

1.4.4 SYSTEM CONTINUITY

US 93 is classified as a limited access, principal arterial and is part of the National Highway System (NHS). US 93 is an integral part of the regional transportation network, connecting interstate population and commerce centers. It is the major north-south highway in western Montana, as well as the major north-south artery for the Bitterroot National Forest. It also serves local commercial users and the traveling public.

US 93 from RP 23.24 to RP 36.85 was reconstructed in 1991 under project 7-1 (36) 23 Darby-South. The paved width of this project was at least 40 feet throughout, with the exception of the segment from RP 23.24 to RP 25.88. In this 2.5-mile segment, the roadbed was reconstructed wide enough to accommodate a future 40-foot paved width, but it was paved only 28 feet wide.

US 93 to the south was reconstructed under the project NH 7-1(58) 9 F Sula-North & South. The paved width of this project is 40 feet throughout.

Proposed improvements would enhance driver expectancy and system continuity by providing a consistent road width. There is a component of driver expectancy that should be considered. When a driver encounters an improved section of roadway, as currently exists north and south of the project corridor, there is an expectation that the roadway improvements will be continuous. The typical driver will not expect the surface and configuration of the road to change sporadically for short distances between improved sections. More specifically, a driver traveling on US 93 on either side of this section with widened shoulders, standard design speeds, adequate clear zones and standard roadway features, will reasonably expect that these conditions will continue without an abrupt change.

1.5 Project History

US 93 was built in this area under the Forest Highway Program in 1936 and 1937 with minor improvements in 1939.

A draft *Environmental Assessment* (EA) was prepared by MDT for this project in December 1995. In addition to various typical section alternatives and centerline alignments, five alternatives were assessed for avoidance and minimization of the impacts to the Medicine Tree. These alternatives have been carried forward into this EA. In the 1995 EA Alternative E in the Medicine Tree area was selected as the preferred alternative by the Montana Highway Commission. This was an off-alignment alternative that crossed the East Fork Bitterroot River in the area of the Medicine Tree. A decision document was never prepared and signed for the 1995 EA.

A draft Memorandum of Agreement (MOA) with the Confederated Salish and Kootenai Tribes (CSKT) was initiated in 1999 to protect the culturally significant Medicine Tree. The draft MOA identifies a mutual agreement by MDT and CSKT that replaces Alternative E with Alternative D

as the preferred alternative alignment in the Medicine Tree area. In addition, a privacy wall to protect the tree from the highway is included in the design. Until the MOA is finalized, the MDT will comply with the draft MOA.

This EA will incorporate the current proposed design for the Medicine Tree area, as well as avoidance and minimization measures proposed to reduce impacts to the East Fork Bitterroot River system and floodplain. This EA assesses the impacts associated with Alternative D in the Medicine Tree Area and improvements on the current alignment.

2.0 ALTERNATIVES CONSIDERED

2.1 Descriptions of Alternatives

2.1.1 NO-ACTION ALTERNATIVE

One alternative considered and evaluated for this proposed project is the No-Action Alternative, which would leave the roadway in its present location and condition without improvements. This alternative is included as required by the FHWA Technical Advisory (T 6640.8A, October 30, 1987). This would result in no improvements beyond routine maintenance. This alternative was not selected as the preferred alternative because it does not satisfy the stated purpose and need of the project. It would not provide a facility capable of effectively handling the existing or projected traffic volumes, reduce the projected higher-than-average maintenance costs, or enhance safety for this stretch of the roadway. No right-of-way would be required.

2.1.2 BUILD ALTERNATIVES

Preferred Alternative: Reconstruction of US 93 on the Present Traveled Way (PTW)

From the beginning of the project at Reference Post (RP) 16.24 to the river crossing at RP 18.1, the new centerline will generally follow the existing horizontal alignment with some shifting toward the west shoulder of the existing road. From RP 18.1 to RP 22.74, the new centerline will generally be on the east shoulder of the present traveled way (PTW), excluding the Medicine Tree alternatives. From RP 22.74, the common end point of the Medicine Tree alternatives, to the end of the reconstruction section at RP 23.24, the new centerline follows the existing centerline. Some minor alignment shifts or curvature may be associated with a river meander reconnection as discussed in Section 3.8.3. See the Preferred Alternative depicted in **Figure 1-4**.

The alignment and typical section have been refined to minimize river, floodplain and riparian/wetland impacts by use of fill-side walls in selected locations. This alternative includes:

- Graded roadway to accommodate a 40-foot paved surface.
- Two 12-foot lanes.
- Eight-foot shoulders.
- Replace bridge over East Fork Bitterroot River (RP 18.1).
- Privacy wall at Medicine Tree.
- Fill-side walls adjacent to the river to minimize slope impacts to river, floodplains and wetlands. A fill-side wall would be located on the downhill side of the roadway where the new road embankment, without the wall, would extend into a sensitive area. Numerous wall types could be used. See **Figure 3-4** for photo simulation example.
- Culvert extension/replacement at various locations.
- Right-of-way acquisitions will be required.
- Utility relocation.
- Left-turn lanes will be evaluated in selected locations during final design.

Because this proposed project closely follows the existing highway alignment, environmental impacts will be minimized. Pursuing this alternative satisfies the purpose and need by providing a safe, efficient, traffic facility capable of meeting existing and future demands. This alternative is carried forth in Chapter 3.0 as the Preferred Alternative.

Avoidance and Minimization Measures

Coordination meetings have been held with permitting and resource agencies to discuss the recommendations for avoidance and minimization of impacts to wetlands, the East Fork Bitterroot River and floodplain and known wildlife crossing locations, as part of reconstructing US 93 on the PTW as described above. The design modifications following the coordination meetings, eliminated or shortened (in height or length, approximately 2,835 feet) fill-side walls, by adjusting the horizontal alignment, thereby minimizing impacts to those resources. The impacts to floodplain areas were also minimized by steepening side slopes where feasible. Locations of walls in relation to the bankfull elevation and 100-year floodplain were discussed and evaluated, as well as wildlife crossing safety improvements.

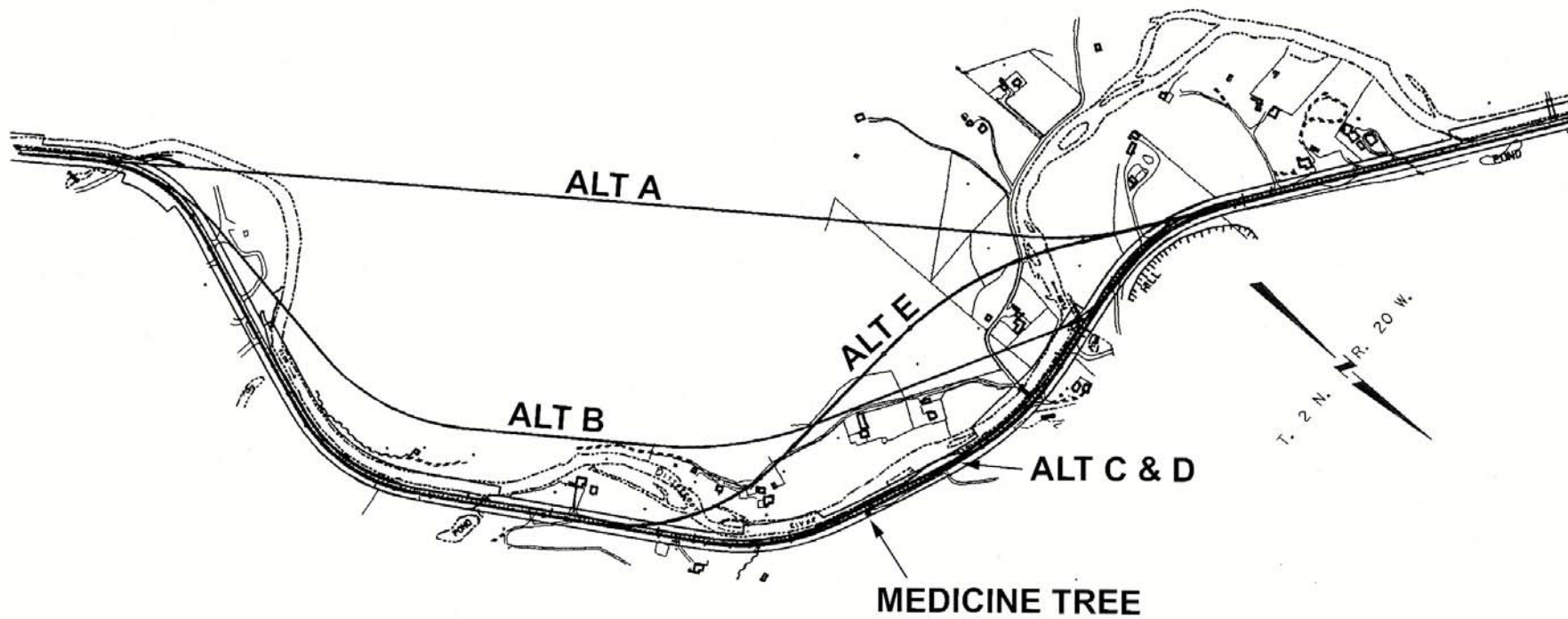
2.1.3 MEDICINE TREE ALTERNATIVES

The Medicine Tree site (24RA513), located near RP 20.5, is a sacred place to members of the Confederated Salish and Kootenai Tribes (CSKT) as well as other Native American groups in the region. The Medicine Tree site represents the most culturally sensitive area within the project corridor, and was listed on the National Register of Historic Places (NRHP) in April 1995. The Medicine Tree site is a traditional cultural property, which falls under the jurisdiction of the National Historic Preservation Act (1996) and the American Indian Religious Freedom Act (1978).

The Medicine Tree represents a significant sacred site to members of the CSKT, who continued to use it in the practice of their native religion. CSKT members believe that their present and future well being as a *living culture* depends on continued use of the Medicine Tree site for spiritual purposes. Sacred sites like the Medicine Tree are at the core of CSKT cultural and spiritual identity.

The existing highway corridor is a long established route effectively serving residential, tourist, and farm-to-market traffic. There are no local alternatives (new alignment) having any advantage over the existing highway corridor for this project. The available corridor is very narrow due to the presence of the river on one side and high mountains on the other. Five alternative alignments were developed for consideration in the Medicine Tree area as shown in **Figure 2-1** to avoid the Medicine Tree. The five alternatives are discussed in more detail.

Although the extent of avoidance varies for each alternative, it is the intent of all proposed alternatives in this sensitive area to avoid and/or reduce further impact to the Medicine Tree. The following five alternative alignments were considered as possible ways to avoid or reduce further conflict with the site. **Figure 2-1** shows the approximate locations of the five alignments. A modification of Alignment D is presented as the current Preferred Alternative.



Alignment A

This alternative route would depart to the west of the existing road at RP 19.6, cross the East Fork Bitterroot River and cut through a mountain on a nearly straight horizontal alignment before crossing the river and reconnect to the existing road at RP 21.0±. This alignment would completely avoid the Medicine Tree by relocating the highway on the opposite side of the East Fork Bitterroot River. However, two new bridges as well as a cut through the mountain approximately 400 feet deep would be required. The 1995 construction cost estimate was \$36.5 million. This was eliminated due to the extensive impact as well as lack of public support.

Modified Alignment A

A tunnel was considered along this route to avoid the extensive cut slopes on the mountain. This alignment was considered very costly for the achieved benefit.

Alignment B

This alternative route would depart west of the existing roadway near RP 19.6 and cross the East Fork Bitterroot River before following the contour of the mountain base to minimize the cuts as much as possible. The new alignment would pass (behind) west of the Medicine Tree Ranch¹ and another residence before re-crossing the East Fork Bitterroot River again and connecting with the existing roadway at RP 21.0.

This alignment also closely parallels a bend in the river near RP 20.2 between the two new bridge locations. This alternative would have adverse impacts in the form of relocation of four residences, encroachment on the river, undesirable hydraulic qualities, and cost. The 1995 construction cost estimate was \$3.4 million. For these reasons, this alignment was eliminated.

Modified Alignment B

A variation to the Alternative B alignment would have US 93 follow the western riverbank more closely in the area opposite the Medicine Tree to avoid some of the relocations. The cost and feasibility were determined to be unreasonable.

Alignment C

This alternative would follow the existing horizontal alignment of US 93. In the immediate vicinity of the Medicine Tree near RP 20.5, a 1,000-foot-long cantilevered roadway structure would be built to shift the road west about 22 feet over the river and away from the tree. The common end points of Alignments A and B were used for a comparative cost analysis of alternatives. River impacts would include loss of riparian vegetation under the cantilever structure due to reduced sunlight, temporary increase in turbidity in the river sediment load from construction, and minor changes in the river bottom contour due to the intrusion of a man-made structure. Visual and noise impacts at the Medicine Tree, though moderately reduced, would not be eliminated. The 1995 construction cost estimate was \$3.9 million.

Alignment D

This alternative is very similar to Alignment C with the exception of using a fill-side wall to shift the 1,000 foot segment of US 93 towards the river and away from the Medicine Tree. This

¹ Although the Medicine Tree Ranch got its name from the cultural site, it is not associated with the Medicine Tree.

alignment would closely follow the current alignment and would shift the alignment approximately 12 feet towards the river. Channel impacts to the East Fork Bitterroot River would include temporary construction-related sediment loading. Visual and noise impacts at the Medicine Tree, though moderately reduced, would not be eliminated. MDT also considered using a curb and gutter section, no ditches, underground drains, and guardrail on the riverside with no filling or river channel changes. The 1995 construction cost estimate was \$0.7 million.

Preferred Alternative: Modified Alignment D

Since 1995, a modified Alternative D, has been selected as a Preferred Alternative and has been assessed in this EA as part of the proposed build alternative. Modified Alignment D has narrowed shoulders, includes a privacy wall at the Medicine Tree and fill-side walls above the high water mark of the East Fork Bitterroot River in certain locations (see **Figure 2-2** for conceptual design typical section).

Alignment E

This alternative would depart to the west of the existing road at RP 20.2 and cross the East Fork Bitterroot River at RP 20.4. This would place the alignment on the west side of the river totally avoiding the Medicine Tree. This alignment rejoins the existing road at about RP 21.0. Two new bridges would be required for this alternative and impact one residence. Short-term construction-related impacts would include a temporary increase in turbidity in the river. On October 13, 1994 the Montana Highway Commission selected this route as the preferred alternative and was assessed in the 1995 EA. The 1995 construction cost estimate was \$2.1 million.

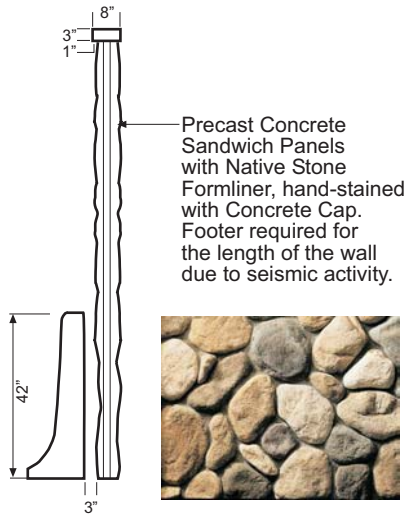
2.2 Alternatives Considered, But Not Advanced

2.2.1 EVALUATION CRITERIA

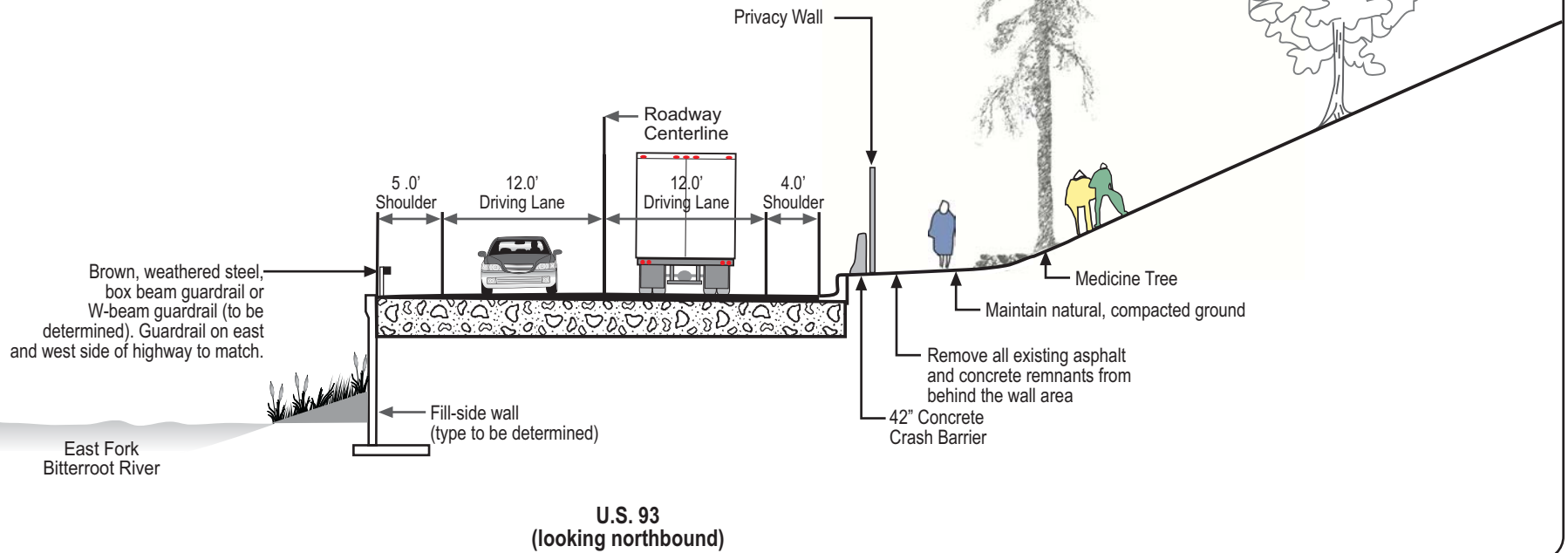
The following criteria were considered in the alternative evaluation process to select the Preferred Alternative.

- **MEETS PURPOSE AND NEED:** As defined in Chapter One
- **SAFETY IMPROVEMENTS:** Shoulder widths meet AASHTO and NHS standards, passing lanes, improved sight distance, improved access geometry and visibility.
- **CONSTRUCTABILITY:** Slope containment, fill-side walls, structures (bridges, tunnels, etc).
- **RIGHT-OF-WAY/RELOCATIONS:** Does the alternative require private or public property acquisition, easements or relocations?
- **ENVIRONMENTAL IMPACTS:** Wetlands and riparian vegetation, cultural properties, water resources (water quality) impacts, Section 4(f), visual impacts, wildlife habitat/crossings, noise considerations.
- **PUBLIC ACCEPTANCE**

*This plan is conceptual and represents design development discussions. Detailed engineering and a site survey will be completed prior to construction planning.



In final design match native formliner scale and color to adjacent rock outcropping.



Not to Scale

conner
NORTH & SOUTH

Typical Section Medicine Tree

Figure 2-2

- **SYSTEM CONTINUITY:** Does the typical section/laneage/design speeds, driver expectancy correspond to adjacent sections of US 93?
- **CAPITAL COST**

2.2.2 EVALUATION OF ALTERNATIVES SUMMARY

The evaluation criteria were used to assess the benefits, impacts and effectiveness of the alternatives for improvements to US 93 in the project corridor.

The off-alignment alternatives (Alignments A, Modified A, B, Modified B and E as shown in **Figure 2-1**) proposing to move the highway away from the Medicine Tree are not recommended due to the impacts to local landowners, construction of two new bridges, potential encroachment on the river and prohibitive construction costs. Alternative A would also impact an elk wintering range. These alternatives were not supported by the local landowners.

While Alignment E was assessed previously in the 1995 EA, it has been eliminated from further consideration due to its impact to local landowners, environmental impacts, failure to address safety concerns and its construction cost.

Alignments C and D both remain on the existing alignment but include centerline shifts away from the Medicine Tree towards the river. Alignment C was eliminated from further consideration due to its greater impact to the river, floodplain and vegetation and its construction cost when compared to Alignment D.

Since Reconstruction of US 93 on the Present Travel Way and Medicine Tree Modified Alignment D meet Purpose and Need best, they have been selected as the Preferred Alternative and carried forth in Chapter 3.0—Existing Conditions, Impacts and Mitigation. Continued refinement will be made through the design process to minimize and avoid impacts. The Preferred Alternative is described in Sections 2.1.2 and 2.1.3 in more detail.

The No-Action Alternative does not meet Purpose and Need for the project, and will continue to have maintenance, traffic and safety concerns associated with the deficiencies. As required by MEPA/NEPA, the No-Action Alternative will be assessed in Chapter 3.0.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter evaluates current conditions of the project environment; it evaluates environmental and social consequences of the alternatives; and identifies mitigation measures to minimize effects of the Preferred Alternative.

3.1 Land Use

3.1.1 AFFECTED ENVIRONMENT

The proposed project is located in the Bitterroot Valley of southwestern Montana and surrounded on the east and west sides by the Bitterroot National Forest. The Bitterroot Valley is approximately 25 miles wide, 96 miles long, and covers 2,383 square miles. Pockets of the Bitterroot National Forest are adjacent to the study area. The corridor character is mountainous steep terrain, river and floodplain and some open lands with scattered home sites.

The Bitterroot National Forest lands are managed with primarily two different management goals. The management goals of the majority of neighboring forest areas to US 93 are to maintain the partial retention visual quality objective and manage timber. The USFS activities emphasize roaded dispersed recreation activities, old growth, and big game cover. The Forest Service also aims to provide moderate levels of timber, livestock forage, big game forage and access for mineral exploration. A small portion of the roadway is also adjacent to the Lewis and Clark National Historic Trail.

Up until 30 years ago, private land use in the study area consisted of timber production, agriculture, and open space. These land uses have recently transformed over to rural home sites. The transformation is viewed as a trend that will continue into the near future. The aesthetic value and recreational opportunities of the Bitterroot Valley have drawn residents to the area. The valley has become a desirable place to live, often for retirees and other people from out-of-state.

Toward the northern end of the project corridor along US 93 is the town of Conner with land uses typical of rural towns. The town of Conner does not have a comprehensive land use plan, zoning or planning policy. Ravalli County has special zoning districts elsewhere in the county. There are no zoning districts within the project corridor. The city of Hamilton is the county seat of Ravalli County, which basically covers the Bitterroot Valley.

Ravalli County has experienced population growth four times the statewide average since 1970, particularly between 1993 and 1998. Consequently, residential development will likely continue in the study area until the remaining undeveloped lands are occupied. Traffic congestion has not been a problem in this part of the US 93 corridor such that it limited growth.

3.1.2 LAND USE IMPACTS

No-Action Alternative. No direct conversion of land for highway use would result from the No-Action Alternative.

Preferred Alternative. Direct conversion of use would occur to adjacent land acquired for right-of-way and easements. Related to indirect effects, one assumption for this project is that population growth and new development are not going to occur solely due to the proposed transportation improvements. According to the study *Guidance for Estimating the Indirect Effects of Proposed Transportation Projects* (Transportation Research Board, NCHRP Report 403, 1998), future population growth and related development in any location is dependent on a number of variables that will shape the look, density, timing, and viability of that development. Some of these factors include the strength of the local and general economy, interest rates, land availability and price, the price of gas, the availability and price of building supplies, new industry or services, availability of housing, land use or access controls, local politics, and personal preferences. Transportation improvements are also a factor that could influence the location and timing of future development depending on where and when improvements are constructed. The appearance and density of any future development is not very easily determined based on the planning scale of this assessment and availability of future development plans. Since most future assumptions are based on a 2024 design year, many variables will change from year to year that would individually or collectively influence a different set of circumstances.

The general region may be considered generally favorable for future growth based on historical growth rates, potential growth generators related to tourism and the region's export of natural resources, minimal growth restrictions, availability of large vacant land parcels with suitable soils for development, and since US 93 is the primary north-south route in western Montana. However, the project is not near Missoula or another population center, and most people who are using the road are doing so regardless of the potential improvements. Since additional capacity from additional lanes is not a part of the Preferred Alternative and the improvements are mostly on the current alignment, the likelihood of induced growth and conversion of land use as a result from the proposed action is not likely.

3.1.3 LAND USE MITIGATION

No mitigation is required.

3.2 Farmland

3.2.1 AFFECTED ENVIRONMENT

According to the Natural Resources Conservation Service (NRCS), there is one soil type in the highway corridor that is considered Prime Farmland. There is not any unique farmland in the study area. One parcel of prime farmland soil type Ab (Adel Loam) is located between Station 195+00 to Station 202+00 (approximately RP 17.8). The Bitterroot Conservation District has not designated any soils as Farmland of Local Importance.

3.2.2 FARMLAND IMPACTS

No-Action Alternative. No impacts to Prime Farmland will occur with the No-Action Alternative.

Preferred Alternative. There would be no impacts to prime farmland as a result of implementation of the Preferred Alternative because the proposed widening improvements would be to the other side of the highway where the Prime Farmland is located. The May 6, 2002 coordination letter from the U.S. Department of Agriculture's National Resources Conservation Service (NRCS) is located in Appendix A.

3.2.3 FARMLAND MITIGATION

No mitigation is required for prime farmland resources.

3.3 Social

3.3.1 AFFECTED ENVIRONMENT

The Bitterroot Valley stretches south from Missoula approximately 96 miles to the Idaho border at Lost Trail Pass. The principal thoroughfare is US 93. The route follows the East Fork Bitterroot River and connects the cities and towns of the valley.

According to results of the 2000 Census, Ravalli County has a population of 36,070 residents (U.S. Census Bureau, 2000). This is an increase of 44 percent compared to 1990 population figures, which makes Ravalli one of the fastest growing counties in the state of Montana. **Table 3-1** shows some current and projected population statistics. The unincorporated town of Conner, which is located in the northern portion of the study area and is largely rural in nature, has a population of about 200 people.

Table 3-1
Population Statistics

| Year | Ravalli County Population Estimate | State of Montana Population Estimate |
|------|---------------------------------------|---|
| 1990 | 25,010 | 799,065 |
| 1999 | 36,070 | 902,195 |
| 2005 | 41,320 | 934,570 |
| 2010 | 45,790 | 980,660 |
| 2015 | 50,210 | 1,030,210 |
| 2020 | 54,590 | 1,082,260 |
| 2025 | 58,970 | 1,136,860 |

Sources: U.S. Census Bureau and Montana Department of Commerce

Most emergency providers for the study area, including the sheriff's department and the fire district, are based in the town of Hamilton, located about 24 miles north of Conner. Hamilton also provides full medical services.

There are a total of 14 public schools and 3 private schools in the Bitterroot Valley. Schools are located in Darby, Corvallis, Florence, Hamilton, Stevensville, and Victor. Darby, located approximately seven miles from Conner, has the nearest schools to the study area. It has one elementary school, one junior high, and one high school. Most children from the study area attend school in Darby, however some children may attend school in Hamilton. The nearest higher education facilities are in Missoula. These include the University of Montana and Missoula College of Technology.

3.3.2 SOCIAL IMPACTS

No-Action Alternative. The No-Action Alternative would not improve highway safety and ease of travel. As traffic volumes increase, travel times, accidents and emergency response times would continue to increase.

Preferred Alternative. There would be no direct impacts to social conditions, social interaction, or community cohesion in the study area under the Preferred Alternative. The Preferred Alternative would not change the population growth or demographic trends projected for the study area (see Section 3.1.2 for discussion of assumed indirect effects). The improvements with the Preferred Alternative would be made within or adjacent to existing right-of-way and, therefore, would not disrupt or separate any neighborhoods in the study area. The Preferred Alternative would provide safer, more efficient and convenient travel for groups and individuals traveling to schools, recreation areas, businesses, and churches. No changes would occur to commercial services and no neighborhoods would be disrupted due to implementation of this alternative. The safety features included in the Preferred Alternative would improve emergency response time, by providing wider shoulders and allowing emergency vehicles to pass.

Access may be temporarily restricted during construction, resulting in delays or increased travel times. Emergency access would be maintained during construction.

3.3.3 ENVIRONMENTAL JUSTICE AND TITLE VI

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, signed by President Clinton on February 11, 1994, directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and/or adverse effects of federal projects on the health or environment of minority and low-income populations, and minority-owned businesses to the greatest extent practical and permitted by law.

According to the U.S. Census Bureau (2000), in Ravalli County there is a total minority population of 3.3 percent. Comparatively, the State of Montana has a minority population of 9.4 percent. No minority or low-income populations and no minority group or neighborhood have

been identified within or adjacent to the project corridor that would be adversely affected by any of the alternatives.

In accordance with the Title VI of the Civil Rights Act of 1964, the study area was evaluated for impacts to Indian reservations, tribal land outside a reservation, and minority/low income neighborhoods. There are no Indian reservation lands within Ravalli County, however the Medicine Tree site as discussed in Section 3.15 was deeded to the Confederated Salish and Kootenai tribes for the overall protection and preservation of the site. Proposed US 93 improvements are being designed to avoid impacting the Medicine Tree site.

No-Action Alternative. The No-Action Alternative would not affect, separate, or isolate any distinct neighborhoods, low-income groups, or minority households or businesses.

Preferred Alternative. The Preferred Alternative would not affect, separate, or isolate any distinct neighborhoods, low-income groups, or minority households or businesses. This project will not create disproportionately high and adverse human health or environmental effects on minority and low-income populations (E.O. 12898) and complies with Title VI of the Civil Right Act of 1964 (42 U.S.C. 2000 d).

3.3.4 SOCIAL MITIGATION

No mitigation is required for social issues.

3.4 Right-of-Way, Relocation, and Utilities

3.4.1 AFFECTED ENVIRONMENT

There are currently 67 different ownership plats, many less than ten acres in the study area. There are only a few large undeveloped tracts of land remaining in the study area.

The proposed corridor alignment has been selected to avoid residences and businesses located adjacent to the existing highway. Existing right-of-way on this section of US 93 varies, but is generally 50 feet on either side of the centerline.

Northwestern Energy and Ravalli County Electric Co-op provide electric services in the study area. Northwestern Energy also provides gas service to the area.

3.4.2 RIGHT-OF-WAY, RELOCATION, AND UTILITIES IMPACTS

No-Action Alternative. The No-Action Alternative will not require any right-of-way acquisition, relocations or utility adjustments.

Preferred Alternative. It is anticipated there would not be any relocation of residences and businesses, nor would any persons be displaced as a result of the Preferred Alternative. Numerous utilities will need to be relocated throughout the project corridor.

MDT owns part of the right-of-way required for construction of the Preferred Alternative; however, acquisition of approximately 63 acres of private land was estimated to be required for right-of-way and/or easements.

Access management for this section of US 93 will be pursued under a separate project NH 0002(606), Access Control US 93 N&S, which is a border-to-border project. The intent of the Access Control US 93 N&S (NH 0002 (606)) is to make the entire US 93 corridor a limited access facility which is consistent with the design of adjacent stretches of US 93 and projects Sula N&S and Darby-South. Every attempt will be made to provide every parcel with reasonable access to US 93. Direct access will be made to US 93 unless reasonable alternative access can be provided consistent with the use of the parcel. The locations of accesses agreed to during right-of-way negotiations for Conner N&S will be coordinated with the recommendations developed in the access control project.

The exact number of parcels that would be impacted has not been identified, as final right-of-way plans have not been developed for the project at the time of this document. The exact quantity of right-of-way acquisition is preliminary and will be refined during final design and/or when more detailed right-of-way information is available. Initial landowner coordination has taken place regarding the potential to reconnect a meander of the East Fork Bitterroot River as part of the project mitigation. This action is proposed with landowner participation and approval.

Authorized utility representatives will relocate underground and overhead utilities, where necessary, before highway construction begins. Brief interruption of services is expected during reconnection of utilities and may result in minor inconvenience to local residents. Utility customers will receive notification well in advance of interruption in service. Utility companies are responsible for obtaining applicable permits and clearances from the Montana Department of Transportation and other agencies, as necessary prior to the relocation of the utilities.

3.4.3 RIGHT-OF-WAY, RELOCATION, AND UTILITIES MITIGATION

The acquisition of land or improvements for highway construction is governed by state and federal laws and regulations designed to protect both the landowners and the taxpaying public. Landowners affected are entitled to receive fair market value for any land or buildings acquired and any damages as defined by law to remaining land due to the effects of highway construction. This action will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646 as amended), (42 U.S.C. 4601, et. seq.) and the Uniform Relocations Act Amendments of 1987 (P.L. 100-17).

- Width of temporary construction permits would be minimized to the extent possible in wetland and stream areas.

3.5 Economic

3.5.1 AFFECTED ENVIRONMENT

The economic vitality of the study area, and the Bitterroot Valley as a whole, is very dependent on tourism and recreation. Residents and visitors of the area enjoy a wide range of outdoor recreational opportunities. Besides tourism, other industries in the area include log home manufacturing, wood production, agriculture, medical research, and manufacturing (Bitterroot Chamber of Commerce).

According to the Montana Department of Labor and Industry, the unemployment rate in Ravalli County for the year 2000 was 5.2 percent compared to the State of Montana average of 4.9 percent. Records from 1999 show the unemployment rate of Ravalli County at 6.0 percent compared to a State of Montana average of 5.2 percent, showing a reduction in the unemployment rate from 1999 to 2000 of 0.8 percent for Ravalli County.

In 1999, Ravalli County had a per capita personal income (PCPI) of \$18,157. This reflects an increase of 2.8 percent from 1998. The 1998-99 state change was 3.2 percent and the national change was 4.5 percent.

Table 3-2 shows the largest industry sectors for Ravalli County and the State of Montana.

Table 3-2
1999 Industry Earnings

| | Largest Industry (% of earnings) | 2nd Largest Industry (% of earnings) | 3rd Largest Industry (% of earnings) |
|------------------|---|--|--|
| Ravalli County | Services (23.5%) | Durable Good Manufacturing (13%) | Retail (12.7%) |
| State of Montana | Services (27%) | State and Local Government (14.2%) | Retail (11.8%) |

Source: Montana Department of Commerce, BEA Regional Facts (BEARFACTS) 2001.

3.5.2 ECONOMIC IMPACTS

No-Action Alternative. This alternative would not change existing economic conditions within the study area. However, since the No-Action Alternative does not solve existing and future safety problems on US 93, long-term worsening conditions could affect interstate commerce, deter tourists from visiting the area for recreation purposes and patronizing local businesses.

Preferred Alternative. Construction projects often create additional jobs in the community where the project is located. There are typically direct jobs due directly to the project itself, such as construction workers, surveyors, etc. Indirect employment jobs can be created in supplying industries such as the asphalt industry, for example. Finally, induced employments are jobs that are supported or created as workers spend their wages, such as retail or service industry

positions. Over the life of the Conner N&S project, many direct, indirect and induced jobs could be expected to be added to the Ravalli County economy.

The overall historical growth trend would not likely change in the long-term (see Section 3.1.2 for assumptions of indirect effects). The long-term economic benefits of the construction of the Preferred Alternative would be direct results of enhanced accessibility to businesses and improved safety along the roadway.

Local travel for residents, tourists, and service vehicles could be interrupted during construction along with other general traffic throughout the project construction period. The Preferred Alternative would provide safer access to the area for local and tourist populations. The project will have little or no effect on the long-term employment situation in the area.

3.5.3 ECONOMIC MITIGATION

No mitigation for economic effects is required.

3.6 Air Quality

3.6.1 AFFECTED ENVIRONMENT

This proposed project is located in an "unclassifiable"/attainment area of Montana for air quality under 40 CFR 81.327. As such, it is not covered under the US Environmental Protection Agency's Final Rule of September 15, 1997, on Air Quality Conformity. Therefore, the proposed action complies with Section 176(c) of the Clean Air Act as amended (42 U.S.C. 7521(a)).

3.6.2 AIR QUALITY IMPACTS

No-Action Alternative. Minimal air quality impacts for the No-Action Alternative would occur over time due to possible localized increases in carbon monoxide (CO) as congestion increases causing vehicle speeds to decrease. Overall increases in traffic volume will increase pollutants.

Preferred Alternative. The Preferred Alternative would result in short-term air quality effects due to construction operations and increases in particulate emissions and dust from ground disturbances. Emissions of carbon monoxide may slightly decline due to efficiencies in vehicle operation. Overall increases in traffic volume will increase all pollutants.

3.6.3 AIR QUALITY MITIGATION

Short-term impacts to air quality from construction equipment on gravel roads will be mitigated as required by permit limitations and conditions covering operational requirements and emission limitations. In addition, the MDT Standard Specifications for Road and Bridge Construction will be implemented as applicable. It presents guidelines for earthwork operations and other construction activities to help minimize effects on air quality.

Particulate or dust emissions will be minimized during construction through implementation of Best Management Practices (BMPs) by the contractor to control dust.

Contractors will be required to obtain permits from the DEQ's Air Quality Division for compliance.

3.7 Noise

3.7.1 AFFECTED ENVIRONMENT

Land uses within the study area are generally either rural residential or undeveloped. Existing noise measurements were taken at four representative locations along US 93 considered to be "noise sensitive" land uses. Noise receptors are structures and locations where human activities typically occur. **Table 3-3** shows existing noise levels at these receptors during peak traffic conditions. Site #5 is the Medicine Tree site, which has been assessed in a separate noise study by MDT.

Table 3-3
Existing Noise Levels

| Noise Receptor No. | Location | Existing Noise Levels (Leq - dBA) | | NAC Activity Category | FHWA NAC Leq |
|--------------------|-----------------------------|-----------------------------------|-----|-----------------------|--------------|
| | | AM | PM | | |
| #1 | Rocky Knob Lodge—RP 17.5 | 62 | 59 | B | 67 |
| #2 | Residence—RP 18.5 | 60 | 62 | B | 67 |
| #3 | Medicine Tree Ranch—RP 20.7 | 57 | 58 | B | 67 |
| #4 | Residence—RP 23.4 | 59 | 61 | B | 67 |
| #5 | Medicine Tree—RP 20.5 | N/A | 66* | A | 57 |

*Measurement taken during MDT noise study

The Federal Highway Administration (FHWA) has established national criteria by which to judge noise levels on certain land uses. These are shown in **Table 3-4**:

Table 3-4
FHWA Noise Abatement Criteria (NAC)
Hourly A-Weighted Sound Level (dBA)

| Activity Category | Leq* (hourly) | Description of Activity Category |
|-------------------|---------------|--|
| A | 57 (exterior) | Lands on which serenity and quiet are of extraordinary significance. |
| B | 67 (exterior) | Picnic areas, recreation areas, parks, residences, motels, churches. |
| C | 72 (exterior) | Developed lands not included in Categories A or B above, businesses |
| D | -- | Undeveloped lands. |
| E | 52 (interior) | Residences, hotels, schools, churches, libraries, and hospitals. |

Source: "Procedures for Abatement of Highway Traffic Noise and Construction Noise" (23 CFR Part 772).

* Leq describes the mean noise level heard during the peak traffic period.

The Medicine Tree site is considered to be Category A since it is used by the CSKT Tribe for noise-sensitive activities.

Under 23 CFR 772, a traffic noise impact is defined as noise levels that "approach" or "exceed" the Noise Abatement Criteria (NAC). FHWA has mandated that "approach" be defined as within one dBA. MDT has adopted FHWA's one dBA definition of "approach." This means that any noise level, which comes within one Leq dBA of the FHWA NAC, will be defined as a noise impact. According to FHWA, impact also includes the condition when the predicted traffic noise levels "substantially" exceed the existing noise levels. FHWA and MDT have defined "substantially" per MDT's June 2001 "Traffic Noise Analysis and Abatement: Policy and Procedure Manual" as 13 A-weighted decibels.

3.7.2 NOISE IMPACTS

No-Action Alternative. Current noise levels would continue to increase as traffic volumes continue to grow. Noise levels would likely increase by one to three decibels.

Preferred Alternative. A qualitative noise assessment was prepared comparing existing and future projected traffic volumes, the existing and proposed typical section and the geometric design proposed for the improvements to determine estimated future noise levels. Since no additional lanes are proposed or change in design speed, noise levels are estimated to increase at the same rate as pre-construction noise levels. The noise assessment indicates that the design year noise levels would not exceed the FHWA NAC with the Preferred Alternative, with the exception of Site #5 (Medicine Tree), which was analyzed in the previous EA and was found to currently, as well as in the future, have a noise impact based on Category A conditions.

Table 3-5 identifies the future estimated noise levels.

**Table 3-5
Future Estimated Noise Levels**

| Noise Receptor No. | Location | Existing Noise Levels (Leq – dBA) | | Future Estimated Noise Levels (Leq - dBA) | | FHWA NAC Leq ⁽¹⁾ | Noise Impact? |
|--------------------|-----------------------------|-----------------------------------|----|---|----|-----------------------------|---------------|
| | | AM | PM | AM | PM | | |
| #1 | Rocky Knob Lodge—RP 17.5 | 62 | 59 | 64 | 61 | 67 | no |
| #2 | Residence—RP 18.5 | 60 | 62 | 62 | 63 | 67 | no |
| #3 | Medicine Tree Ranch—RP 20.7 | 57 | 58 | 59 | 60 | 67 | no |
| #4 | Residence—RP 23.4 | 59 | 61 | 61 | 63 | 67 | no |
| #5 | Medicine Tree—RP 20.5 | N/A | 66 | N/A | 66 | 57 | yes |

(1) See Table 3-4 for definition of FHWA Noise Abatement Criteria (NAC)

The existing average daily traffic is 1,370 vehicles and the future design year traffic levels are projected to be 2,200 vehicles, representing a 60 percent increase.

Site #1-Rocky Knob Lodge

The proposed road widening would occur to the north of the current centerline, away from the structure. The existing travel lane would remain in roughly the same location. Since the travel lane is not moving closer to the structure, the future noise increases would be attributed to the increase in future traffic volumes. This would represent a 1-3 decibel increase in future sound levels. This is not considered to be a noise impact by MDT or FHWA standards.

Site #2-Residence @ RP 18.5

The proposed road widening would occur to the north of the current centerline, away from the residence. The existing travel lane would remain in roughly the same location. Since the travel lane is not moving closer to the residence, the future noise increases would be attributed to the increase in future traffic volumes. This would represent a 1-3 decibel increase in future sound levels. This is not considered to be a noise impact by MDT or FHWA standards.

Site #3-Medicine Tree Ranch @ RP 20.7

The property and residence are located on the opposite side of the river (south) approximately 250 feet from the highway. The highway is proposed to be relocated 12 feet closer to the river in this area due to the Medicine Tree cultural site located on the north side of the road. The highway will be transitioning back to the current alignment directly opposite the residence.

The distance that the highway is proposed to move closer to the residence is negligible compared to the distance between the residence and the highway. For comparison, if the distance between the highway and receiver was decreased by half, then a three-decibel increase in noise would be expected. A three-decibel increase would be barely perceptible to the human ear. In other words, the highway would need to move 125 feet closer to the residence for this increase to occur. The future increase in noise levels would be primarily

attributable to the increase in future traffic volumes. This would represent a one to three decibel increase in future sound levels. This is not considered to be a noise impact by MDT or FHWA standards.

Site #4-Residence @ RP 23.4

This residence is located at the end of the project where the improvements are on the current alignment. The travel lane will not be shifted closer to the residence. Since the travel lane is not moving closer to the structure, the future noise increases would be attributed to the increase in future traffic volumes. This would represent a one- to three-decibel increase in sound levels. This is not considered to be a noise impact by MDT or FHWA standards.

Site #5-Medicine Tree located @ RP 22.5

The Medicine Tree cultural site has been described as within the FHWA Category A for lands on which serenity and quiet are of extraordinary importance. While future noise levels would be expected to increase one to three decibels due to the increase in future traffic, the proposed improvements shift the alignment 12 feet away from the Medicine Tree (doubling) the distance between the receiver and the noise source; this in effect, negates the estimated noise level increase due to the traffic increase, by providing an approximate three decibel reduction. This is considered an impact as it exceeds the absolute criteria for Category A noise levels.

3.7.3 NOISE MITIGATION

No noise mitigation will be required. However, as part of the project coordination with the Confederated Salish and Kootenai Tribes, MDT has incorporated a privacy wall into the design plans to create a larger protected area for the Medicine Tree site users. Vehicular access and informal parking will be provided. The privacy wall will provide some sound attenuation for the highway-generated noise (see **Figure 3-1**).

The proposed project complies with provisions of MDT's noise policy per MDT's June 2001 "Traffic Noise Analysis and Abatement: Policy and Procedure Manual."

3.8 Water Resources and Water Quality**3.8.1 AFFECTED ENVIRONMENT**

The East Fork Bitterroot River originates in the higher elevations of the Sapphire Mountain Range and the Bitterroot National Forest and flows approximately 40 miles west and north to its confluence with the West Fork Bitterroot River near the town of Conner, Montana. The lower 12 miles of river flows through a fairly confined valley/canyon parallel to Highway 93. This river is located in the Upper Clark Fork watershed within the Columbia River Basin. The East Fork Bitterroot River provides the greatest amount of aquatic habitat still connected to the main stem of the Bitterroot River and has large areas of undeveloped roadless and wilderness lands in its headwaters region. The East Fork Bitterroot River is a relatively clean, cold swift moving stream with a narrow riparian area that is naturally constricted by the narrow canyon through which it flows. Streambanks are mostly stable throughout the study area, with a few problem areas noted. Substrates are composed of large cobbles and gravels, with some scattered boulders. The East Fork Bitterroot River is considered critical habitat for the Endangered Species Act



Photo taken August 2001

(ESA) listed bull trout. The project is undergoing formal consultation with the USFWS for the ESA-listed bull trout. For these reasons, the East Fork Bitterroot River is an important provider of aquatic habitat in the entire Bitterroot River system.

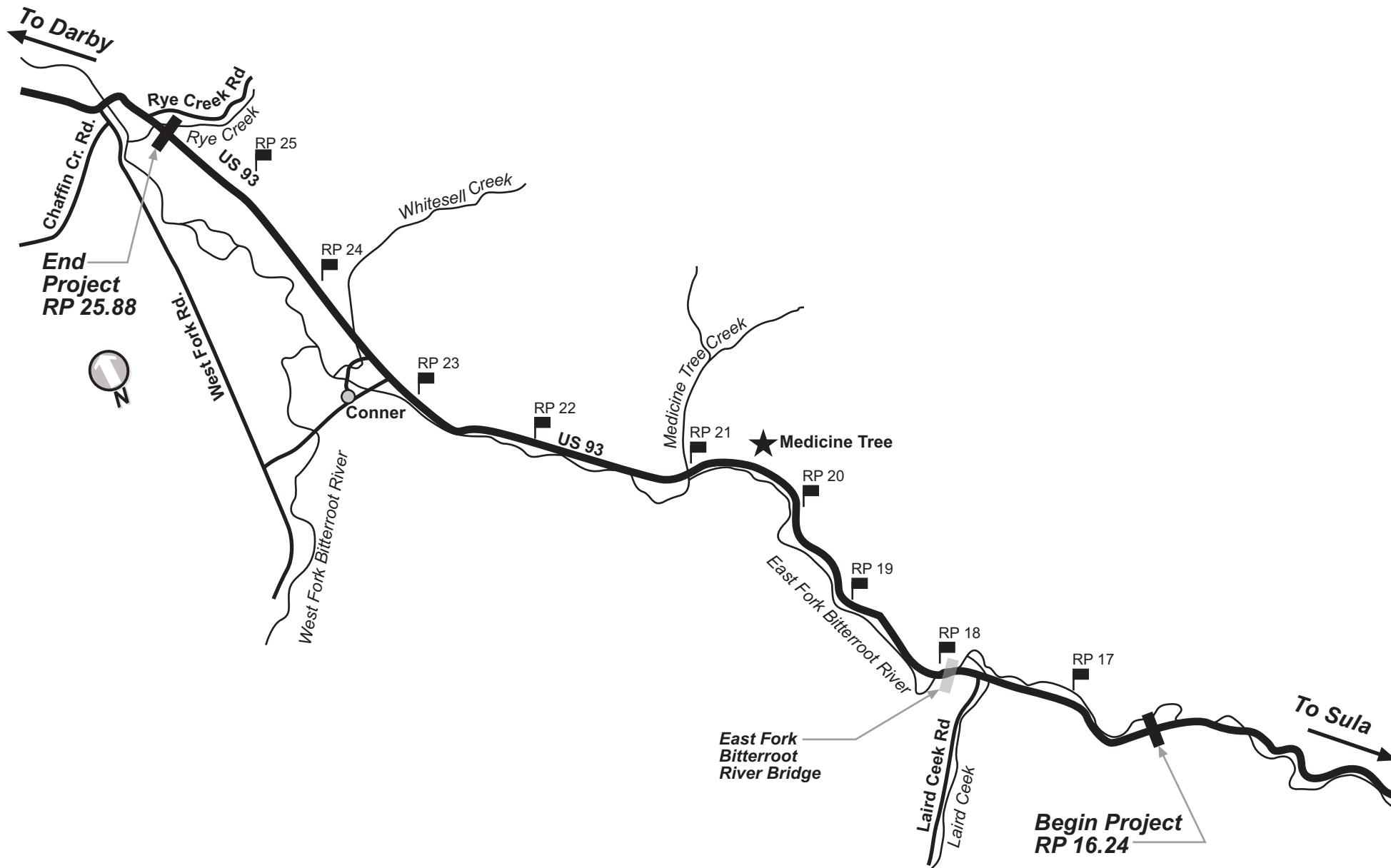
Surface water resources within or adjacent to the study area, and nearby tributaries to the East Fork Bitterroot River are shown in **Figure 3-2** and include:

- **Laird Creek.** Flows originate in upper elevations of the Bitterroot Mountain Range and flow northeast into the East Fork Bitterroot River at Laird Creek Road RP 17.6 (Station 197+30) and Highway 93. It is approximately six feet wide and has stable streambanks and a gravel substrate.
- **Medicine Tree Creek.** Flows west into the East Fork Bitterroot River near RP 20.7 (Station 362+50). It currently is three to six feet wide, braided and unstable upstream of the highway.
- **Cameron Creek.** Flows south into the East Fork Bitterroot River at the intersection of East Fork Bitterroot River Road and Highway 93, just west of Sula (outside the study area).
- **Warm Springs Creek.** Flows northeast into the East Fork Bitterroot River at the intersection of frontage road 370 and Highway 93, northwest of Sula (outside the study area).
- **Whitesell Creek.** Adjacent to the study area and outside of the reconstruction area, the Whitesell Creek flows west into the East Fork Bitterroot River just upstream of where the East and West Forks join.

Currently, water quality and water resources of the East Fork Bitterroot River system are impaired by factors including:

- Contemporary (residential, logging, and agricultural development) and historical land uses
- Proximity of Highway 93
- Highway maintenance practices for Highway 93
- Conditions of streams tributary to the East Fork Bitterroot River

Water quality conditions of streams tributary to the East Fork Bitterroot River can have an effect on the water quality of the East Fork Bitterroot River. Section 303(d) of the Federal Clean Water Act requires states to assess the condition of their waters to determine where water quality is impaired or threatened. The result of this review is the 303(d) list, created by the Montana State Department of Environmental Quality (DEQ), and submitted to the Environmental Protection Agency (EPA). Section 303(d) also requires states to prioritize and target water bodies on their list for development of water quality improvement strategies known as Total Maximum Daily Loads (TMDLs), and to develop such strategies for impaired and threatened waters.



Of the five waterbodies within the study area, and tributary to the East Fork Bitterroot River, only Laird Creek was on the 1996, 2000, and 2002 Montana 303(d) list. The probable cause and source of impairment are habitat alteration and siltation from logging road construction. Laird Creek was reassessed and relisted for only partially supporting the beneficial use criteria for aquatic life and cold-water fisheries. The East Fork Bitterroot River was not included on the year 2000 or 2002 Montana 303(d) list and is listed as fully supporting all of its beneficial uses.

The proximity of Highway 93 to the river has also simplified river habitat through channel straightening, bank armoring, riparian and wetland vegetation removal, and meander cut-off. An increase in river corridor development has further increased channel straightening, channel simplification, amount of impervious surface, and the introduction of exotic species. These impacts of the past have adversely affected present water quality conditions due to a loss of natural and native vegetative filtering and sediment storage, loss of fish habitat, and a reduced distance from sediment and pollutant sources to the river.

A Feasibility Assessment and Review of Potential Hydrologic Impacts Associated with the Conner North and South Project (November 2001, Water Consulting, Inc.) discussed and evaluated potential impacts to the East Fork Bitterroot River and the opportunity for reconnecting a historic oxbow meander associated with this project.

3.8.2 WATER RESOURCES AND WATER QUALITY IMPACTS

No-Action Alternative. No roadway improvements would be constructed with the No-Action Alternative; therefore there would be no project-related impacts to the East Fork Bitterroot River or its tributaries. The No-Action Alternative will result in the continuation of an influx of fine sediment and pollutants that are introduced to the river during highway maintenance sanding, snow plowing, and snow melt.

Preferred Alternative. In an effort to minimize highway fill slopes from impacting the river, the Preferred Alternative includes a number of locations of fill-side wall treatment. The existing highway alignment and construction created truncated river meanders that have resulted in erosion and maintenance problems along the highway/river interface. The Preferred Alternative design includes the use of fill-side walls along critical sections at the river edge to support the highway improvements while protecting the highway embankment during flood events and allowing an area of floodplain bench to be revegetated.

The Feasibility Assessment mentioned previously, addressed proposed wall locations and areas of fill within the river and/or floodplain. A field review was conducted for each of the proposed wall locations in an effort to assess the hydrologic impacts of the fill-side walls and highway embankments. Following additional coordination with resource and permitting agencies, and additional design modifications, five wall sections were eliminated, as well as, wall length totaling 2,835 feet. This was accomplished by steepening side slopes and shifting the highway centerline in areas that would not compromise the design safety to provide more separation between the road and the river.

The current design proposes approximately 12 fill-side wall sections adjacent to the East Fork Bitterroot River over the entire project length. Locations for these are described in **Table 3-6** and generally shown in **Figure 3-3**. **Figure 3-4** is a photo simulation depicting an example, in a different project location, of a fill-side wall treatment.

Table 3-6
Fill-Side Wall Assessment Summary Table

| Figure 3-3 Reference # | Approximate Reference Points | Approximate Wall Length ⁽²⁾ | Approximate Wall Height ⁽²⁾ | Floodplain Encroachment |
|---------------------------|------------------------------------|---|---|----------------------------|
| 1 | RP 16.5-16.6 | 450 feet | 3 to 6 feet | No |
| 2 | RP 17.8-17.9 | 300 feet | 12 feet | No |
| 3 | RP 19.3-19.6 | 1,025 feet | 3 feet | No |
| 4 | RP 19.8-20.2 | 1,750 feet | 3 to 4.5 feet | No |
| 5 ⁽¹⁾ | RP 20.5-20.6 | 850 feet | 10.5 feet | Yes |
| 6 ⁽¹⁾ | RP 20.6-20.7 | 200 feet | 3 feet | No |
| 7 | RP 20.7-20.8 | 450 feet | 3 to 6 feet | No |
| 8 | RP 21.3 | 150 feet | 3 feet | Yes |
| 9 | RP 21.4-21.5 | 400 feet | 3 feet | No |
| 10 | RP 21.7-21.9 | 750 feet | 3 feet | No |
| 11 | RP 21.9 | 75 feet | 3 to 7.5 feet | No |
| 12 | RP 22.8-22.9 | 350 feet | 6 to 9 feet | No |

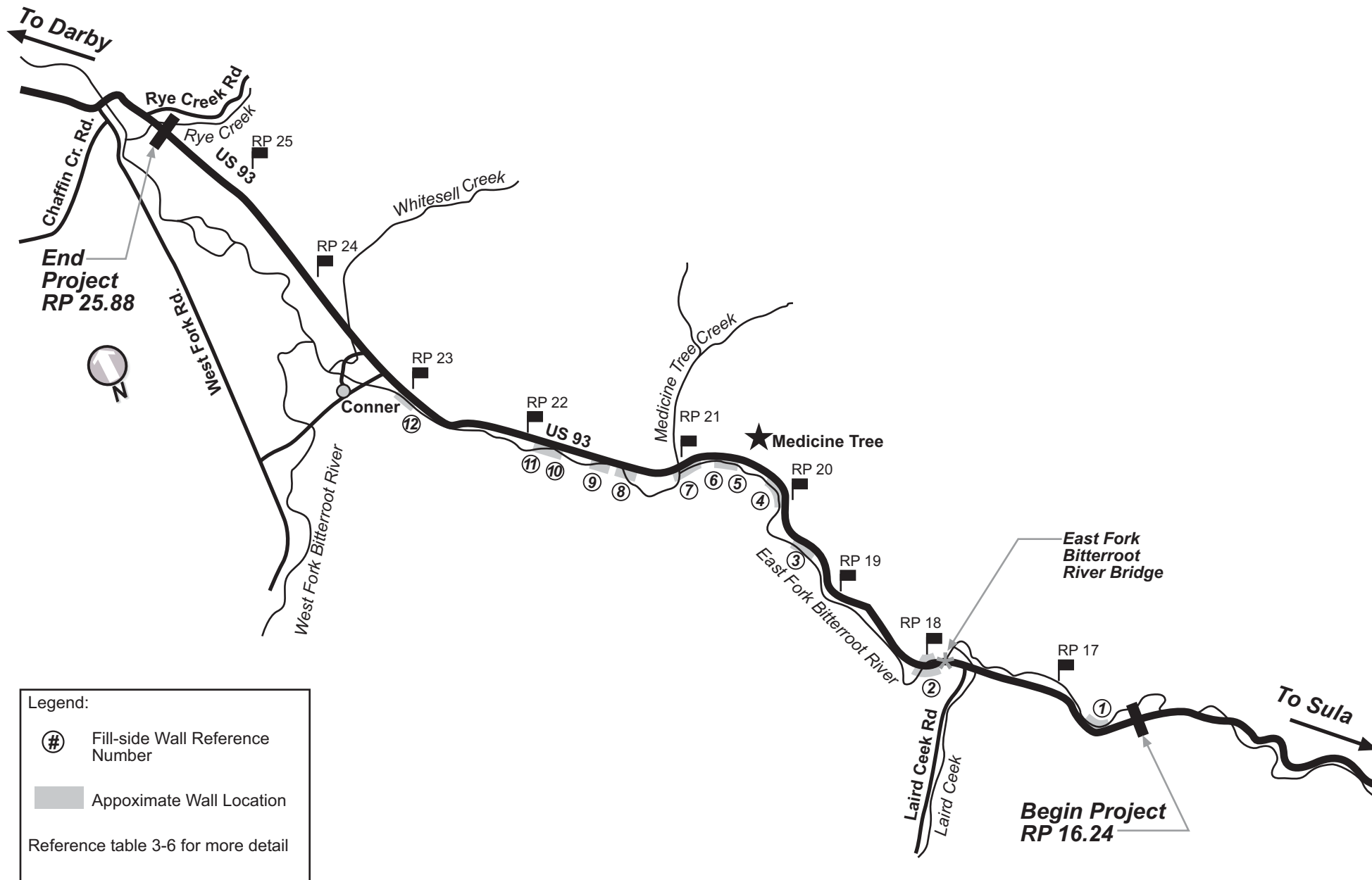
⁽¹⁾ Medicine Tree Location. See Figure 1-3.

⁽²⁾ Approximate measurements are based on conceptual design.

Construction is expected to cause reductions in aquatic structure, streambank wetlands, and beneficial riparian cover along the East Fork Bitterroot River where wall or road construction coincide with these areas.

The primary water quality impact caused by the existing highway is increased sediment loading in the East Fork Bitterroot River where the highway is located close to the river. The major factors that affect this are increases in point source discharges and the loss of natural sediment storage features such as wetlands, floodplains, and natural vegetated filtration buffers. An increase in highway width and impervious surface could impact water quality in the East Fork Bitterroot River by increasing the amount of sand, salt, and snow removal quantities, however current maintenance practices will continue to occur, regardless of the proposed improvements.

The existing design plans include the replacement of the existing bridge structure at RP 18.1, and the potential for two additional bridges as part of the potential oxbow meander reactivation that is currently being pursued with local landowners. These bridges have not been designed. The bridge design effort will investigate different approaches to developing the final structure through a process that will address environmental concerns, recreational floater activity, cost



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Approximate Fill-Side Wall Locations

Figure 3-3



and feasibility. The process will seek a *practicable* solution, defining the term in the language of Section 404 (b)(1) guidelines (23 CFR Part 777): "...available and capable of being done after taking into consideration cost, existing technology, and logistics, in light of overall project purposes." These efforts will be coordinated with permitting agencies.

3.8.3 WATER RESOURCES AND WATER QUALITY MITIGATION

MDT, in conjunction with MFWP and by coordination with other state and federal resource agencies, is considering to reactivate a river meander to improve river function, habitat, create wetlands and restore river length. It has not yet been determined which of the potential oxbows will be reactivated and there is potential that none will occur pending further discussions with local landowners. By reactivating the historic meander, additional wetland acreage could be created in the historic meander, or by improving the wetlands associated with the existing channel if a hydraulic connection is maintained. Additional wetland acreage could assist sediment filtration and result in improved water quality.

- Application of MDT's Best Management Practices (BMPs) for contractors regarding water quality and stormwater runoff will provide for minimization of impacts to water resources.
- A Stormwater Pollution Prevention Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment will be designed and approved by Montana Department of Environmental Quality (MDEQ) prior to construction.
- Revegetation of disturbed slopes to minimize sedimentation and restore aquatic habitat.
- Any restrictions on work near streams or in wetlands will be specified as terms of water-related permits obtained from MDEQ, MFWP, and the Corps of Engineers.

See also Section 3.19.2 for mitigation identified for construction-related water quality impacts.

3.9 Permits Required

The following permits will be acquired prior to any relevant disturbance:

- A 124SPA Stream Protection Permit will be required from the Montana Fish, Wildlife and Parks. Proposed development activities (by governmental agencies) in or near streams that may affect the beds or banks are governed by the Montana Stream Protection Act. The Montana Fish, Wildlife and Parks administer this law, and its purpose is to preserve and protect fish and wildlife resources in their natural existing state.
- Floodplain permit from Ravalli County.

The Preferred Alternative will require the following permits under the Clean Water Act (33 U.S.C. 1251-1376):

- A Section 402/Montana Pollutant Discharge Elimination System permit from the Montana Department of Environmental Quality's Permitting and Compliance Division will be required. A Notice of Intent (NOI) for Stormwater Discharges under the Montana Pollutant Discharge Elimination System (MPDES) and a General Permit (MTR100000; effective June 8, 2002)

will be required with DEQ for the control of water pollution for both specific and non-point sources.

The goal of the MPDES regulation (ARM 16.20.1314) program is to control point source discharges of wastewater such that water quality of the receiving streams is protected. All point sources of wastewater discharge are required to obtain and comply with MPDES permits. This permitting process will serve only as a notice of intent to discharge, rather than a submittal for agency review or approval of a Stormwater Pollution Prevention Plan (SWPPP).

- A 318 Authorization for short-term turbidity may be required. This authorization would be obtained from the DEQ's Water Protection Bureau prior to the start of any highway construction.
- A *Section 404* permit from the U.S. Army Corps of Engineers.
- All work will be in accordance with the Water Quality Act of 1987 (P.L. 100-4), as amended.

The contractor will be required to exercise reasonable precautions during construction to prevent pollution of all waters located in the study area. The contractor will also be required to meet the requirements of the applicable regulations of the Montana Fish, Wildlife and Parks, Department of Environmental Quality, and other local, state, or federal regulations for the prevention or abatement of water pollution. These include the applicable regulations under the Federal Clean Water Act of 1987 as well as the Montana Environmental Policy Act.

The Preferred Alternative may require the following permit for air quality from the Montana Department of Environmental Quality:

- Air and Waste Management Bureau, asphalt plant and crusher permit

The Preferred Alternative may require the following permits, if applicable for relocation of utilities, from the Montana Department of Transportation's Missoula District:

- RW131 Permit for utilities located in the right-of-way
- RW20 Permit for encroachment in the right-of-way
- RW20S Permit for attachment of utilities to structures

3.10 Wetlands

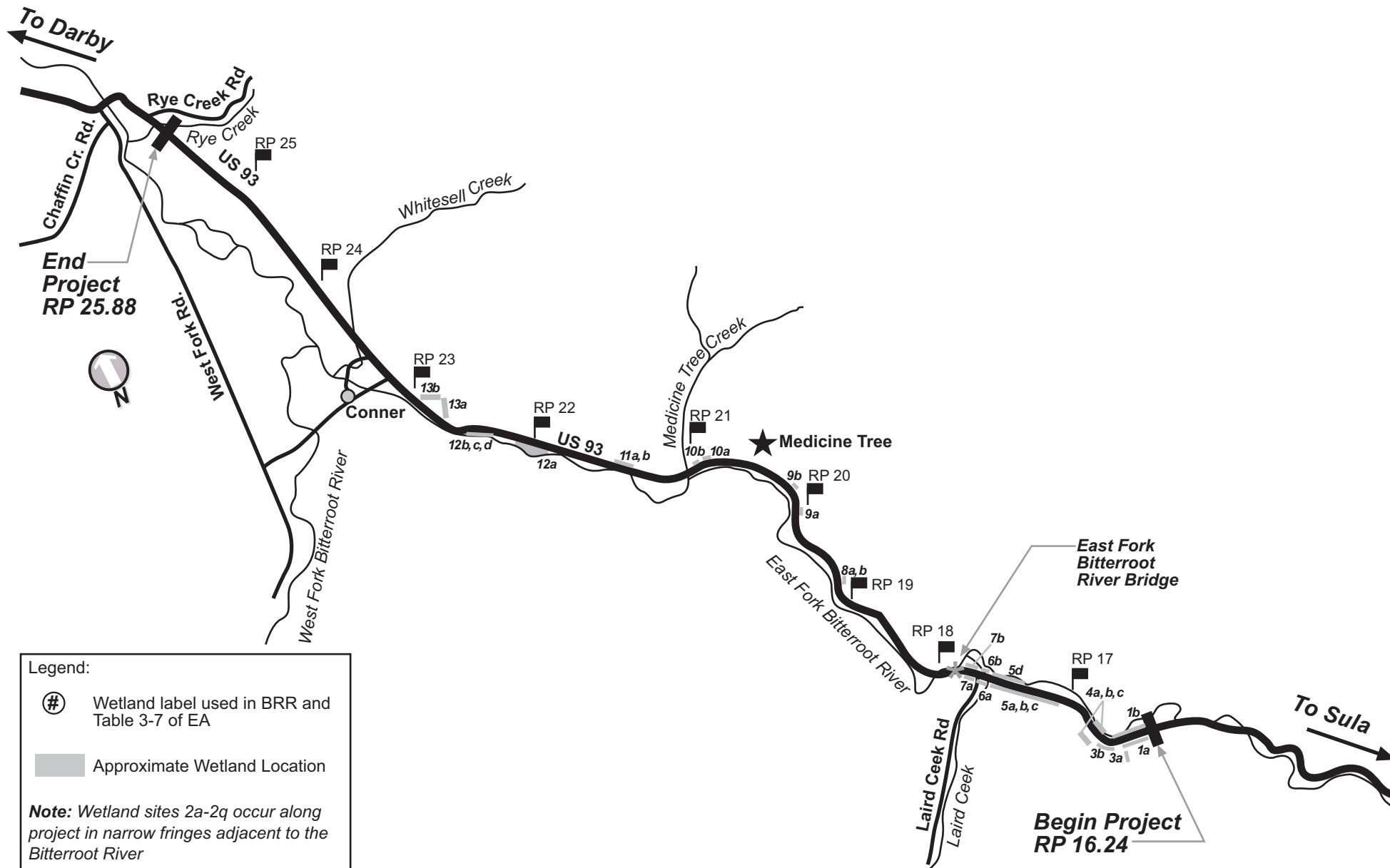
3.10.1 AFFECTED ENVIRONMENT

Thirteen wetland sites (comprised of 46 sub-sites) were delineated in the study area. **Table 3-7** includes approximate station locations, wetland classes and ratings and estimated impact acreage. **Figure 3-5** depicts the general wetland locations. Additional information on representative species, soil data and field evaluation ratings are detailed in the Biological Resources Report prepared by Turnstone Biological and Land and Water Consulting, Inc. (2003).

Table 3-7
General Characteristics of Wetlands within the Study Area

| Site | Approximate Stationing/ Reference Points | Vegetated Cowardin Classes¹ | MDT Wetland Category² | Source of Wetland Hydrology | Estimated Impact (Acres) | Narrative Description |
|-------------|---|---|---|------------------------------------|---------------------------------|---|
| 1a | 122+84-130+80 L (RP 16.2-16.4) | Scrub/Shrub Emergent | IV | Groundwater | 0.4 | Depression in floodplain |
| 1b | 122+84-137+00 L&R (RP 16.2-16.5) | Emergent | IV | Groundwater | 0.2 | Roadside borrow ditch |
| 2a-2q | Various—see plans | Scrub/Shrub Emergent | III | East Fork Bitterroot River | 0.2 | Narrow wetland fringe along river banks in numerous locations |
| 3a | 137+50-138+50 L (RP 16.5-16.6) | Scrub/Shrub Emergent | III | Groundwater | 0.03 | Cutoff oxbow meander |
| 3b | 142+00-146+70 L (RP 16.7-16.8) | Scrub/Shrub Emergent | III | Groundwater | 0.6 | Depression in floodplain |
| 4a | 148+00-156+40 L (RP 16.8-16.9) | Scrub/Shrub Emergent | IV | Groundwater | 0.1 | Depression in floodplain |
| 4b | 158+60-159+00 L (RP 16.9) | Scrub/Shrub Emergent | IV | Groundwater | 0.02 | Depression in floodplain |
| 4c | 151+60-156+00 R (RP 16.8-16.9) | Scrub/Shrub Emergent | IV | Groundwater | 0 | Roadside borrow ditch |
| 5a | 169+10-175+30 L (RP 17.2-17.3) | Emergent | IV | Groundwater | 0.1 | Roadside borrow ditch |
| 5b | 176+20-176+80 L (RP 17.3) | Scrub/Shrub Emergent | IV | Groundwater | 0.02 | Depression in floodplain |
| 5c | 179+00-186+50 L (RP 17.3-17.5) | Scrub/Shrub Emergent | IV | Groundwater | 0.4 | Depression in floodplain |
| 5d | 181+00-192+00 R (RP 17.4-17.6) | Scrub/Shrub Emergent | IV | Groundwater | 0.6 | Depression in floodplain |
| 6a | 197+20 L (RP 17.7) | Scrub/Shrub Emergent | III | Laird Creek | 0.01 | Wetland fringe along creek |
| 6b | 192+80 -202+00 R (RP 17.6-17.8) | Scrub/Shrub Emergent | III | Laird Creek & E.F. Bitterroot | 0.1 | Wetland fringe along stream |
| 7a | 211+50-216+00 L (RP 17.9-18) | Scrub/Shrub Emergent | III | Groundwater | 0.5 | Depression in floodplain |

continued



Wetland delineation not to scale.

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Approximate Wetland Locations

Figure 3-5

Table 3-7 (continued)
General Characteristics of Wetlands within the Study Area

| Site | Approximate Stationing/ Reference Points | Vegetated Cowardin Classes¹ | MDT Wetland Category² | Source of Wetland Hydrology | Estimated Impact (Acres) | Narrative Description |
|-------------|---|---|---|------------------------------------|---------------------------------|------------------------------|
| 7b | 215+20-218+50 R (RP 18-18.1) | Scrub/Shrub Emergent | III | Groundwater | 0 | Depression in floodplain |
| 8a | 289+00-291+00 R (RP 19.4) | Scrub/Shrub Emergent | IV | Groundwater | 0.01 | Cutoff oxbow meander |
| 8b | 294+00-296+00 R (RP 19.5) | Scrub/Shrub Emergent | IV | Groundwater | 0.1 | Cutoff oxbow meander |
| 9a | 310+80-311+10 R (RP 19.8) | Emergent | III | Groundwater | 0.01 | Cutoff oxbow meander |
| 9b | 325+00-326+60 R (RP 20.1) | Scrub/Shrub Emergent | III | Groundwater | 0.1 | Cutoff oxbow meander |
| 10a | 356+00-358+00 R (RP 20.7) | Scrub/Shrub Emergent | II | Groundwater | 0.2 | Cutoff oxbow meander |
| 10b | 362+00-363+00 R (RP 20.8) | Scrub/Shrub Emergent | II | Groundwater | 0.1 | Cutoff oxbow meander |
| 11a | 387+00-391+00 R (RP 21.3) | Scrub/Shrub Emergent | III | Groundwater | 0.2 | Ponded wetland in floodplain |
| 11b | 391+00-394+50 R (RP 21.4) | Scrub/Shrub Emergent | III | Groundwater | 0.4 | Ponded wetland in floodplain |
| 12a | 417+00-428+00 L (RP 21.9-22) | Scrub/Shrub Emergent | II | Seasonal Flooding & Groundwater | 0.6 | Depression in floodplain |
| 12b | 445+00-449+00 L (RP 22.4) | Scrub/Shrub Emergent | II | Seasonal Flooding & Groundwater | 0.1 | Depression in floodplain |
| 12c | 449+10-457+00 L (RP 22.4-22.6) | Scrub/Shrub Emergent | II | Seasonal Flooding & Groundwater | 0.4 | Depression in floodplain |
| 12d | 459+00-466+00 L (RP 22.6-22.8) | Scrub/Shrub Emergent | II | Seasonal Flooding & Groundwater | 0.01 | Depression in floodplain |

continued

Table 3-7 (continued)
General Characteristics of Wetlands within the Study Area

| Site | Approximate Stationing/ Reference Points | Vegetated Cowardin Classes ¹ | MDT Wetland Category ² | Source of Wetland Hydrology | Estimated Impact (Acres) | Narrative Description |
|--|---|---|-----------------------------------|---------------------------------|--------------------------|-----------------------|
| 13a | 462+00-465+00 R (RP 22.7) | Scrub/Shrub Emergent | II | Seasonal Flooding & Groundwater | 0.1 | Cutoff oxbow meander |
| 13b | 468+00-473+50 R (RP 22.8) | Scrub/Shrub Emergent | II | Seasonal Flooding & Groundwater | 0.3 | Cutoff oxbow meander |
| ROUNDED TOTAL ESTIMATED IMPACTS | | | | | 6.0 acres | |

¹Cowardin et. al., 1979

²Berglund, 1999

Source: Table from Conner North & South Biological Resources Report (LWC 2003)

All wetlands in the study area are associated with the East Fork Bitterroot River, its active or historic floodplain, or Laird Creek. The wetlands have a direct hydrologic connection to surface water or are influenced by the high groundwater table of the floodplain. Wetlands are dominated by scrub-shrub communities interspersed with emergent and occasional forested wetland communities. Based on MDT function/value assessment, these wetlands were classified as Category II, III, or IV. All study area wetlands are potentially under the jurisdiction of the U.S. Army Corps of Engineers (Corps). The MDT Montana Wetland Field Evaluation Form assesses and assigns each of 12 functions and values ratings of “low”, “moderate”, or “high”, and scores each on a scale of 0.1 (lowest) to 1 (highest) “functional points”. Functional points are summed on the form and expressed as a percentage of the possible total; functions that do not apply to a given wetland are assigned a rank of NA and are not included in point totals. This percentage is then used in conjunction with other criteria to provide an overall wetland ranking into one of four categories. Category I is the highest ranking and Category IV is the lowest.

3.10.2 WETLAND IMPACTS

Approximately six acres of wetlands are anticipated to be permanently impacted by the project (see **Table 3-8**). These wetlands are likely to be considered Corps jurisdictional wetlands. Wetland impacts would result primarily from vegetation clearing and grubbing prior to fill placement. Temporary disturbance may also occur during construction.

Table 3-8
Impacts by Wetland Quality Category

| Quality Category | By Area of Impact |
|--|------------------------------|
| Category I Wetlands | NA |
| Category II Wetlands | 2 acres |
| Category III Wetlands | 2 acres |
| Category IV Wetlands | 2 acres |
| ROUNDED TOTAL ESTIMATED IMPACTS | 6 acres⁽¹⁾ |

⁽¹⁾ Based on conceptual design

3.10.3 PRACTICABLE ALTERNATIVES²

While the Medicine Tree Alternatives A, B, E or modifications of those would have less wetland impacts, these alternatives were more costly, would disturb more pristine land, had greater landowner impacts, and required two additional crossings of the East Fork Bitterroot River. This project complies with the two major provisions of Executive Order 11990:

That there is no practicable alternative to the proposed construction; and that the proposed action includes all practicable measures to minimize harm to wetlands, which may result from such use. In making this finding, the head of the agency may take into account economic, environmental, and other pertinent factors.

The following measures were incorporated into the Preferred Alternative to avoid and minimize impacts to wetlands and riparian vegetation:

- Fill-side walls will be incorporated in areas adjacent to the East Fork Bitterroot River and its floodplain.
- Selected side slopes will be steepened to minimize impacts to adjacent wetlands.
- The road alignment will be shifted away from the river and associated wetlands to the maximum extent practical, while maintaining safe design parameters.
- Disturbed wetland and streamside areas would be revegetated with desirable species as specified by MDT at the earliest practicable date following disturbance and comply with MPDES and Section 404 permit conditions.

² "Practicable" as defined by 23 CFR Part 777 "means available and capable of being done after taking into consideration cost, existing technology, and logistics, in light of overall project purposes."

3.10.4 WETLAND MITIGATION

The 1990 Memorandum of Agreement Between the EPA and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines requires that wetland mitigation be addressed in the following sequence:

- (1) Avoid potential impacts to the maximum extent practicable.
- (2) Minimize unavoidable impacts to the extent appropriate and practicable.
- (3) Compensate for unavoidable adverse impacts, which remain after all, appropriate and practicable minimization has been required.

Avoidance and Minimization

Impacts were avoided and minimized to the extent practicable by keeping the proposed alignment on or very near the existing alignment, using fill-side walls in the immediate vicinity of the river, and reducing proposed fill slopes. MDT is currently reviewing additional design modifications to further reduce wetland impacts. To minimize sedimentation and construction disturbance, it is recommended that construction in wetlands occur when these sites are as "dry" as possible.

The Section 404 process requires identified wetlands under Corps jurisdiction to be avoided and impacts minimized. Once final design has occurred and wetlands impacts can be quantified, a Section 404 permit will be obtained from the Corps of Engineers. Compensatory mitigation for impacts to wetlands will be identified and committed to at that time.

Compensation

Compensatory mitigation for Corps jurisdictional wetland loss is being pursued in compliance with operating procedures of the MDT Interagency Wetland Group.

- 1) On-site wetland restoration or creation opportunities under review include areas immediately adjacent to the East Fork Bitterroot River and cutoff oxbow meanders.
- 2) MDT will excavate selected slopes adjacent to the East Fork Bitterroot River beyond normal cut/fill slopes on the upland fringe to create floodplain benches and potential wetland buffers where the benefit to do so is cost effective.
- 3) Additionally, off-site mitigation at the recently constructed Camp Creek project is under consideration, if needed.
- 4) Potential reactivation of one oxbow meander along the project could provide a wetland restoration credit to the project.

Impacts to wetlands within the ROW and construction easement areas would be restored to original contours as soon as practicable following disturbance.

To minimize disturbance to wetlands and other Waters of the U.S., the following measures will be implemented:

- Removed culverts, guardrail, and other items will not be stockpiled in or adjacent to wetland or stream areas.
- Construction equipment operating in wetlands will be limited to that which is needed to perform the necessary work. Width of the construction ROW will be minimized to the extent possible in wetland and stream areas.
- A revegetation plan will be developed for this project to be followed by the contractor. The plan will include specifications on seeding methods, seeding dates, types and amounts of mulch and fertilizer, and seed mix components. The plan will also be submitted to the Ravalli County Weed Control District for review. Disturbed wetland and streamside areas will be revegetated with desirable species as specified by MDT at the earliest practicable date following disturbance and comply with MPDES and Section 404 permit conditions.
- Wide-track or balloon-tire construction equipment will be considered in saturated/ inundated areas to minimize soil disturbance. Timber pads, prefabricated equipment pads, or geotextile fabric overlain with gravel fill will be considered with normal equipment in such areas. All pads and temporary fill will be removed following construction.

3.11 Terrestrial Biological Resources

3.11.1 AFFECTED ENVIRONMENT

3.11.1.1 Vegetation

Although recent fires have altered vegetation communities of the study area, pre-fire tree and shrub species are still present. The predominant cover type on the steep south to southwest facing slope is ponderosa pine interspersed with dry shrub land habitats. Moister habitats include Douglas fir as the dominant tree with moderate-age ponderosa pine being sparsely scattered throughout. Common species associated with rocky reaches within 30 feet of the river bottom include bitterbrush, bluebunch wheatgrass, and mountain mahogany. Found in moister areas are ninebark, snowberry, and twinflower.

Riparian thickets of the lower floodplain are a dense mosaic of upland and wetland habitats and provide valuable physical and biological functions. Riparian thickets are comprised of black cottonwood, quaking aspen, thin-leaved alder, water birch, Douglas' hawthorn, red-osier dogwood, willow, and a broad assortment of wet-tolerant grasses and forbs. Much of the riparian vegetation adjacent to the East Fork Bitterroot River was burned during the 2000 wildfires and is showing vigorous regrowth. The drier south- to west-facing slopes provide forested and open forage opportunities with favorable temperatures for wintering game.

Most proposed construction would occur within disturbed vegetation of moderate to relatively low quality wildlife habitat, which is immediately adjacent to the existing highway.

Sensitive and Rare Plant Species of Concern

Sensitive and rare plant species are designated by the United States Forest Service (USFS) for the project study area and by Montana Natural Heritage Program (MNHP). A December 2002

MNHP database search showed three 'sensitive' species within the canyon portion of the project (Table 3-9).

Lemhi beardtongue is state ranked as imperiled and considered a 'sensitive' listed species by the U.S. Forest Service. Although a remnant community was reported near US 93 (RP 20.9), no individuals of this species were located at this site during searches conducted in 2000, 1999, and 1998. According to a USFS botanist, since Lemhi beardtongue does not produce leaves and flowers every year, this species is potentially still present at the site.

Coville's rush is critically imperiled and reported as very rarely existing in wetland habitats near the Conner area. Dwarf onion occurs slightly south of the study area and has been sited near the Sula Basin area.

Table 3-9
Plant Species of Special Concern That May Reside
in the Conner North & South Study Area

| Species | Habitat in the Study Area | Known Distribution in Study Area |
|---|---|---|
| Lemhi beardtongue (<i>Penstemon lemhiensis</i>) | Dry, harsh, decomposed granite sites subject to disturbance | Two to three recorded communities within and near the study area. |
| Coville's Rush (<i>Juncus covillei</i> var. <i>covillei</i>) | Streambanks, wetland depressions, etc. | One recorded community near the Conner area but outside of project limits. |
| Dwarf onion (<i>Allium parvum</i>) | Dry, harsh, fine scree sites subject to disturbance | Canyon areas immediately south of the project only, no records for within project limits. |

Noxious Weeds

Executive Order 13112 mandates that federally funded projects take all precautionary measures possible to preclude the spread of noxious weeds. Due to their invasive characteristics and widespread presence, state-listed Category I noxious weeds are a major concern for all project-related disturbances. Spotted knapweed (*Centaurea maculosa*), Canada thistle (*Cirsium arvense*), common tansy (*Tanacetum vulgare*), hounds-tongue (*Cynoglossum officinale*), and St. Johnswort (*Hypericum perforatum*) are State-listed Category I noxious weeds known to be present in the study area. Spotted knapweed is common within 100 to 200 feet of the existing road in the study area. Twelve additional state-listed noxious weed species are present in Ravalli County, but not observed in the study area. Additionally, non state-listed weeds are present including bull thistle, mullein, and common burdock.

3.11.1.2 General Wildlife

The study area provides habitat for its wide array of wildlife species that include big game (bighorn sheep, mule deer, white-tailed deer, elk, moose), large predators (black bear, coyote), occasional furbearers (muskrat); three species of native forest grouse, assorted raptors, various

waterfowl and shorebirds, and neotropical songbirds. An assortment of amphibians and reptiles are also common to wetland areas. The diversity of wildlife provides great benefit to the canyon's ecology, but appears to a lesser extent within those highway-associated riparian habitats located north of Conner.

The local deer population accounts for most animal-motorist accidents. MDT's highway road kill records from 1998 to 2002 indicate that 35 white-tailed and mule deer were removed and disposed of by highway maintenance crews within the project limits (MDT 2003). Vehicle collisions with deer appear to occur at or near similar levels throughout the entire project length, with no obvious concentration noted. Deer routinely cross the roadways as they travel between bedding and feeding areas throughout the valley. Vehicle collisions with bighorn sheep are also reported to occur in the study area, especially in the vicinity of the Medicine Tree.

Wildlife Species of Concern

A 2002 MNHP data search indicated known or potential occurrences in the project vicinity for two wildlife species of concern (**Table 3-10**): marbled jumping slug (*Hemphillia danielsi*) and great blue heron (*Ardea herodias*). An isolated population of marbled jumping slugs is located in a side canyon over 1 mile from areas of construction. A great blue heron rookery is located in the black cottonwood community of the main East Fork Bitterroot River approximately 0.6 mile west and south of the Conner junction. Additionally, several bat and raptor species may migrate or forage infrequently throughout the study area. No sensitive wildlife species were seen during the field survey for this project.

Table 3-10
Wildlife Species of Concern That May Reside in the Conner North & South Study Area

| Species | Habitat in the Study area | Known Distribution in Study area |
|--|---|--|
| Marbled jumping slug (<i>Hemphillia danielsi</i>) | Higher elevation creek bottoms. | One recorded population within the upper Warm Springs Creek drainage, well beyond construction limits. |
| Great blue heron (<i>Ardea herodias</i>) | Rookery- black cottonwood communities of the main East Fork Bitterroot River. | One recorded rookery west of the Conner junction, and beyond construction limits. |

3.11.2 TERRESTRIAL AND BIOLOGICAL IMPACTS

No-Action Alternative. There would be no project-related impacts to vegetation, wildlife or species of special concern as a result of the No-Action Alternative.

Preferred Alternative.**3.11.2.1 Vegetation and Weeds**

A majority of the proposed construction would occur in areas that are immediately adjacent to the existing highway and are currently subjected to other sources of human disturbance including residential, commercial, and agricultural (farming, grazing) activities. Consequently, habitat to be affected by the Preferred Alternative is generally judged to be of moderate to relatively low overall quality. As such, from a quality perspective, direct impacts from the Preferred Alternative to existing vegetation and wildlife habitat in the project area are considered relatively minor.

Construction would disturb existing noxious weed communities and could create additional habitat suitable for noxious weed establishment within newly disturbed areas. Exposed soils, particularly adjacent to roadways, are vulnerable to weed establishment. Offsite movement of weeds from roadway corridors onto adjacent land can result in reduced land values and productivity through a reduction in vegetative diversity and native plant biomass. Spotted knapweed is common along the project within 100 to 200 feet of the existing road and would likely colonize newly disturbed areas.

Perhaps the most important habitat types in the project area are wetlands and riparian areas. Due to their often-diverse vegetative structure and proximity to water, many wildlife species associate at times with wetland and riparian habitats. Additionally, many species use riparian areas as movement corridors. Permanent and temporary impacts to riparian and wetland habitat are expected with the Preferred Alternative and would occur as a result of alignment shifts and widening of the roadway, bridge construction, and construction of the 12 previously mentioned fill-side walls adjacent to the river.

With respect to sensitive plants, the small population of Lemhi beardtongue near RP 20.9 appears to be the only known species potentially within construction limits.

3.11.2.2 Wildlife

Construction of the Preferred Alternative would result in direct wildlife mortality primarily to those species with limited mobility and/or those that could conceivably be occupying their burrows or nests at the time of construction (e.g., mice, wolves, young birds/eggs, frogs, salamanders, snakes). More mobile species such as adult deer, coyotes, and most adult birds would be able to avoid direct mortality by moving into adjacent habitat. No direct impacts to nesting raptors or waterfowl are anticipated as little nesting is expected to occur in areas that would be directly affected by construction.

Generally, only minor indirect disturbance to wildlife communities is expected to result from actual construction activities. Such disturbance would be temporary and alternative habitat similar to that which would be affected is abundant in the general area, including riparian shrub habitat associated with the East Fork Bitterroot River floodplain. The survival of displaced species that relied exclusively within the construction area (e.g., species with very limited home

ranges, such as mice and voles), however, would depend on the carrying capacity of adjacent undeveloped habitat.

Increased travel speeds due to improved driving conditions could adversely affect wildlife, especially deer, within the immediate vicinity. The existing highway, in association with agricultural practices, fencing, and light residential and commercial development, is a contributor to habitat fragmentation in the project area. Existing habitat fragmentation will be increased by reduction of physical vegetation cover adjacent to the highway, incrementally increased distance between cross-highway habitats, and increased traffic speeds, thus increasing the chance for wildlife/vehicle collisions.

The proposed fill-side walls could also alter wildlife traditional movements and crossing locations. Similarly, overly steep cut slopes could impact wildlife movement patterns in certain areas. Any continuous slope profiles constructed to the maximum proposed 1:1 slope will likely necessitate a different travel approach for larger wildlife.

Both the marbled jumping slug location and great blue heron rookery are outside the project limits and no impacts are anticipated to these species. Other than short-term displacement by construction noise, no direct or indirect impacts are anticipated to sensitive bat and raptor species, which may infrequently use the area.

3.11.3 TERRESTRIAL AND BIOLOGICAL MITIGATION

In accordance with 7-22-2152 and 60-2-208 M.C.A., MDT will re-establish a permanent desirable vegetation community along all areas disturbed by the proposed construction. MDT will develop revegetation specification and special provisions that must be followed by the contractor. These specifications will include instructions on seed mixes, seeding methods, seeding dates, types and amounts of mulch and fertilizer. Seed mixes include a variety of species to assure that areas disturbed by construction are stabilized by vegetative cover.

To minimize impacts to plant communities in the study area, the following measures are provided for MDT's consideration:

- Disturbed wetland and streamside areas will be revegetated with desirable vegetation as soon as practicable following disturbance.
- Prior to construction, a qualified scientist would again try to locate the Lemhi beardtongue population and transplanting would be considered for those plants found within construction limits.
- With the exception of temporary clearing that may be required for culvert placement and relocation of utilities, clearing and grubbing will be confined to the construction limits (i.e., within the cut/fill limits). Clearing beyond defined construction limits will be kept to the minimum necessary for the completion of the project. Any temporary clearing necessary for culvert placement outside the construction limits or temporary facilities will be kept to the smallest area possible and reclaimed with desirable vegetation as soon as practicable.

Appropriate measures would be taken to prevent the introduction and spread of noxious weeds. The Seeding Special Provisions developed for this proposed project will be forwarded to the responsible County Weed Board for approval. The following mitigation measures will be implemented throughout the corridor to minimize vegetation impacts by noxious weeds:

- Minimize clearing of construction limits to maximum extent possible and develop clear zones for safety as practicably yet modestly as possible, with strict contractor adherence to avoidance and/or minimization of construction activity beyond the proposed project limits.
- Power washing of all construction equipment either entering or departing the project area to minimize introduction and/or spread of noxious weeds and whirling disease.
- Completion of a weed management plan by the contractor outlining procedures, contingencies, and responsibilities in the event of a noxious weed outbreak and filing of this plan with the Ravalli County Weed District prior to the start of construction.

Mitigation practices to help minimize animal vehicle collisions are limited by the area's poorly suited topography. Signing is a practical yet only moderately effective method for minimizing collisions.

The following mitigation measures will be implemented to minimize impacts to wildlife throughout the corridor:

- Prior to construction, MNHP records will be reviewed again for new sensitive wildlife species occurrences in the study area, and, as warranted, site-specific mitigation measures will be developed and implemented.
- The reconstructed bridge at RP 18.1 would afford wildlife an opportunity to pass underneath the roadway at this location, as would any new bridges that might be included in the project for reactivation of a historic meander channel. MDT will investigate the opportunity to incorporate benches underneath the bridge ends that would allow for terrestrial wildlife to pass underneath the structures throughout the year except perhaps during extremely high runoff events.
- Where the highway bisects important wetland and other wildlife habitats, other methods to provide habitat connectivity, primarily for small mammals and herptiles, are available. Small mammals have been documented using dry culverts and dry benches within culverts that typically have standing water in them for a portion of the year. For small mammals, 24- to 60-inch-diameter culverts can be used in dry locations or installed in the upper third of the highway fill in wet locations. Where hydrologic connection is important, a solid bench within the culvert and above the ordinary water line can provide a means of crossing for several species. The bench can be cast in-place in concrete box culverts or bolted to the top and sides of metal culverts. This approach would seem viable in the following locations: Stations 141+30 (RP 16), 146+50 (RP 16.8), 186+30 (RP 17.5), 197+20 ((RP 17.7), 356+00 (RP 20.7), and 472+50 (RP 22.8).
- Additionally, to provide a source of water to keep animals from crossing the road, Montana Fish, Wildlife and Parks suggests construction of an artificial watering hole north of the Medicine Tree on the east side of the highway to minimize animal movement across the highway. MDT will do a geotechnical/hydrological investigation to determine the feasibility

of the watering hole and has initiated coordination for a cooperative maintenance arrangement with local interest groups.

3.12 Aquatic Resources

3.12.1 AFFECTED ENVIRONMENT

Perennial streams of the study area include the East Fork Bitterroot River, Laird Creek, and Medicine Tree Creek. Previous discussions of the water resources are found in Section 3.8.

- **East Fork Bitterroot River** is rated an “outstanding” fisheries resource (MFISH 2002). Fish include rainbow trout (*Oncorhynchus mykiss*, abundant resident), brook trout (*Salvelinus fontinalis*, rare resident), brown trout (*Salmo trutta*, common resident), west slope cutthroat trout (*Oncorhynchus clarki lewisi*, rare resident), bull trout (*Salvelinus confluentus*, rare resident), and mountain whitefish (*Prosopium williamson*, abundant resident). This stream does not occur on the State’s 303(d) List of Impaired Waterbodies.
- **Laird Creek**, a tributary to the East Fork Bitterroot River, is a “high” value fisheries resource (MFISH 2002). Species composition includes rainbow trout (common resident), westslope cutthroat trout (abundant resident) and bull trout (rare resident). The creek flows under the highway in a 4-foot by 4-foot box culvert and will be replaced with an appropriately designed culvert that meets water conveyance and fish passage. Despite a slightly perched outlet, it appears as though fish are currently able to pass through the existing culvert moving up and downstream. No spawning is known to occur below the existing culvert. This stream is on the State’s 303(d) List of Impaired Waterbodies with habitat alterations and siltation as probably causes and silviculture and logging road construction as the probable sources.
- **Medicine Tree Creek**, a tributary to East Fork Bitterroot River. Few fish are present in Medicine Tree Creek although this stream is not on the State’s 303(d) List of Impaired Water bodies. The creek flows under the highway in a 36-inch CSP and will be replaced with an appropriately designed culvert that meets water conveyance and fish passage. Fish are unable to swim through the existing culvert due to a perched outlet and steep gradient through the culvert.

Sensitive Species of Concern

A MNHP records indicate the presence in the study area of west slope cutthroat trout, a Species of Concern **Table 3-11**.

Table 3-11
Species of Special Concern That May
Reside in the Conner North & South Study Area

| Species | Habitat in the Study area | Known Distribution in Study Area |
|--|---|---|
| Westslope cutthroat trout (<i>Oncorhynchus clarki lewisi</i>) | Clear freestone streams of the Intermountain West, present throughout the upper Bitterroot system | Appreciable numbers in project portion of East Fork Bitterroot River, and associated tributaries. |

West slope cutthroat trout are a USFS sensitive species within the Bitterroot National Forrest, and a species of special concern by the State of Montana and Montana Chapter of the American Fisheries Society. In 1997 endemic westslope cutthroat trout were petitioned for threatened and endangered species listing, but eliminated from consideration following an extensive status review. This species occurs frequently throughout the upper East Fork Bitterroot River drainage. Bull trout are also a species of concern and are addressed in Section 3.14, Threatened or Endangered Species.

3.12.2 AQUATIC RESOURCE IMPACTS

No-Action Alternative. There would be no new impacts to fisheries or species of special concern as a result of the No-Action Alternative. Existing impacts from winter sanding and from general roadway runoff are expected to continue.

Preferred Alternative. Impacts to aquatic resources will primarily result from direct disturbance associated with existing bridge demolition, new bridge construction, culvert replacement, and fill-side wall construction. Existing impacts from sand/gravel use during the winter months and general roadway runoff are expected to continue following construction. **Table 3-12** summarizes proposed activities that will likely occur to aquatic resources and habitat. Construction activities would result in temporary increased erosion potential, reduced slope stability, and could temporarily increase turbidity in the river downstream of the project, particularly during precipitation events. Increased exposure of soils in the study area would provide a continuing source of sediment into the local system during precipitation events until stabilized.

Table 3-12
Summary of Proposed Activities at or Near Study Area Streams

| Stream | Proposed Alteration / Activity |
|---|---|
| Laird Creek (RP 17.7) | Remove existing four-foot by four-foot concrete box culvert and replace with an appropriately designed culvert that meets water conveyance and fish passage. Fish passage is a concern and will be maintained at this location. |
| Medicine Tree Creek (RP 20.8) | Replace existing 36-inch CSP with an appropriately designed culvert that meets water conveyance and fish passage. A temporary fish barrier will be designed for this structure, per MFWP. |
| East Fork Bitterroot River Bridge (RP 18.1) | Construct new bridge across river on slightly different alignment while maintaining traffic on existing alignment. Bridge design is incomplete. The bridge design effort will investigate different approaches to developing the final structure through a process that will address environmental concerns, recreational floater activity, cost and feasibility. The process will seek a <i>practicable</i> solution, defining the term in the language of Section 404 (b) (1) guidelines (23 CFR Part 777): "...available and capable of being done after taking into consideration cost, existing technology, and logistics, in light of overall project purposes." Existing bridge will be demolished after completion of the new bridge. |

continued

Table 3-13 (continued)
Summary of Proposed Activities at or Near Study Area Streams

| Stream | Proposed Alteration / Activity |
|--|---|
| East Fork Bitterroot River (stationing unknown) | Two additional bridges across the East Fork Bitterroot River would be necessary to accommodate the potential reactivation of a previously cutoff oxbow meander. It has not yet been determined which of the potential oxbows will be reactivated and there is potential that none will occur pending further discussions with local landowners. Should additional bridges be needed to accommodate this work, a bridge design effort will investigate different approaches to developing the final structure through a process that will address environmental concerns, recreational floater activity, cost and feasibility. The process will seek a practicable solution, defining the term in the language of Section 404 (b) (1) guidelines (23 CFR Part 777): "...available and capable of being done after taking into consideration cost, existing technology, and logistics, in light of overall project purposes." |
| East Fork Bitterroot River—fill-side walls (various locations) | See Figure 3-3 and Table 3-6 for proposed fill-side wall locations. |

While short-term negative impacts are probable with the Preferred Alternative, the aquatic environment may also benefit from the proposed action. The potential reactivation of a cutoff meander would add length to the East Fork Bitterroot River, thus improving flow dynamics and increasing potential aquatic habitat for fish and other wildlife. Aggressive revegetation efforts adjacent to the river would help stabilize banks, add shading to the river, and increase the long-term potential for woody debris recruitment into the drainage. Construction activities would temporarily increase erosion potential.

3.12.3 AQUATIC RESOURCES MITIGATION

- A Stormwater Pollution Prevention Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment transport will be implemented throughout the project.
- Development of a revegetation plan, erosion control plan, and stormwater pollution prevention plan will be coordinated with appropriate permitting and resources agencies.
- Any restrictions on work near streams or in wetlands will be specified as terms of water-related permits obtained from the MDEQ, MFWP, and the Corps.

The MDT standard specifications require that the contractor must, unless specifically permitted to do otherwise:

- Not spill or dump material from equipment into streams or associated wetlands.
- Not permit wash water from cleaning concrete related equipment or wet concrete to enter streams, riparian areas, or wetlands.
- Not place fill or embankment material into streams, streambeds, riparian areas, or wetlands.

- Store and handle petroleum products, chemical, cement, and other deleterious materials in a manner that prevents their entry into streams and associated wetlands.
- Provide sediment controls for drainage from topsoil stockpiles, staging areas, access roads, channel changes, and instream excavations.
- Reclaim streambeds and streambanks as closely as possible to their pre-construction condition.
- Any equipment that would ultimately come in contact with the water would be steam-cleaned prior to and after completion of the project to help prevent the spread of whirling disease to other potential waters.

3.13 Floodplains

3.13.1 AFFECTED ENVIRONMENT

Executive Order 11988, Floodplain Management, requires federal agencies to avoid direct or indirect support of development in floodplains whenever a practical alternative exists. The base flood (100-year flood or a flood that has a 1-percent chance of being equaled or exceeded in any given year) is the regulatory standard used by federal agencies, and most states, to administer floodplain management programs. As described in the Code of Federal Regulation, 23 CFR 650 Subpart A, floodplains provide natural and beneficial values serving as areas for fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural flood moderation, water quality maintenance, and groundwater recharge.

The East Fork Bitterroot River has not been delineated by the Flood Insurance Program, and therefore has no formal Federal Emergency Management Agency (FEMA) designated 100-year floodplain. However, at the request of the Ravalli County Commissioners, a floodplain study of the East and West Forks Bitterroot River was conducted through the Montana Department of Natural Resources and Conservation (DNRC). The Bitterroot Floodplain Management Study was prepared and signed in January of 1992, and updated in October of 1998. Based on the study, the Bitterroot County Commissioners adopted floodplain regulations in accordance with Montana law, thus allowing the county to participate in the National Flood Insurance Program, administered by FEMA. The study reach involves about 26 miles of the East Fork Bitterroot River and 21 miles of the West Fork Bitterroot River stream channels. Of this, 2.7 miles of the East Fork Bitterroot River were evaluated and mapped by approximate methods. The drainage area of the East Fork Bitterroot River ranges from about 118 square miles at the upstream end of the Floodplain Management study area and about 405 square miles at the mouth.

South of Conner, the East Fork Bitterroot River flows through a narrow and confined valley formed by ancient glacial moraines and outwash fans. The soils that compose the East Fork Bitterroot River channel contain varying amounts of rounded gravel, cobbles, stones, and boulders. The soils along the floodplains are moderately well drained to very poorly drained. Major management concerns for the floodplain soils of the East Fork Bitterroot River include flooding, high water tables, and areas with shallow depths to sand and gravel.

Historically, all of the major floods on the East Fork Bitterroot River have occurred during the months of May or June, a time when most of the winter snow pack is melting, as well as a time of heavy precipitation. Flooding usually occurs due to rapid snowmelt, moderate to high rainfall, or a combination of both. These factors, coupled with the steep stream gradient and narrow confines of the East Fork Bitterroot River valley, present the potential for high and potentially hazardous water velocities.

On the East Fork Bitterroot River, a stream gauge located about four miles south of Conner, within the current study area, was in operation from approximately 1937 through 1972. The five largest flood events recorded at that gauge are listed in **Table 3-14**:

Table 3-14
Five Largest Flood Events on East Fork Bitterroot River

| Date | Peak Discharge |
|---------------|----------------|
| May 9, 1947 | 3,660 cfs |
| May 29, 1948 | 3,760 cfs |
| June 8, 1964 | 3,270 cfs |
| June 12, 1965 | 3,270 cfs |
| June 2, 1972 | 4,000 cfs |

Source: Floodplain Management Study, 1998.

Presently, floods occur on average of about once every ten years on the East Fork Bitterroot River and its tributaries. Within the Conner North-South study area, approximately 900 acres along the East Fork Bitterroot River are within the 100-year flood area.

The area and depth of flooding is not expected to change dramatically in the future. The Bitterroot National Forest Service has been monitoring tributary streams to the East Fork Bitterroot River (Laird and Dixon creeks) since the fires of 2000. Due to the removal of vegetation and understory as a result of the fires, runoff from snowmelt or precipitation has increased, and therefore changed runoff timing and duration in these areas, but probably would not have an impact on the flood potential of the river.

Development within the floodplain may have an effect on flooding depths. The Montana Floodplain law provides the means to implement a program of sensible land use regulations to keep future development out of flood prone areas. The law calls for restrictive land use within identified floodplain areas, structured around the 100-year floodplain. Buildings for living purposes or commercial structures are not allowed within the designated floodplain; however, buildings are allowed in the floodplain fringe areas if their lowest floor is elevated two feet above the 100-year flood elevation. Channel vegetation would be protected and maintained to increase stability and reduce erosion, and proper management of the riparian zone could reduce streambank erosion and damage to adjacent land.

3.13.2 FLOODPLAIN IMPACTS

Impacts to the 100-year floodplain can occur in two forms 1) directly through changes to the capacity of the floodplain (e.g., bridge piers, roadway fill); or 2) indirectly through an increase in the total volume of water arriving at and being conveyed by the floodplain. Both impacts could result in an alteration of the existing floodplain water surface elevation. Increases in water surface elevations could result in an increase in the 100-year floodplain area and the probability of flooding structures previously located outside the floodplain.

No-Action Alternative. No improvements will be made with the No-Action Alternative that will affect the 100-year floodplain.

Preferred Alternative. The Preferred Alternative will include transportation improvements that will occupy delineated floodplain areas of the East Fork Bitterroot River floodplain. Flooding risk to US 93 is negligible since the roadway is designed to be above the 100-year flood levels. A study was prepared entitled *Recommendations to Avoid and Minimize Impacts to the East Fork of the Bitterroot River* (Water Consulting, Inc. and Carter & Burgess, Inc., 2002) in which potential impacts to the East Fork Bitterroot River and floodplain were identified. The study proposed measures to minimize and avoid impacts to the river and floodplain. Design modifications have been made to the conceptual design plans and will continue to be evaluated through the design process to reduce impacts further. As described in Section 3.8.2 and **Table 3-6**, there are two locations of proposed fill-side walls totaling approximately 1,000 feet that may encroach longitudinally onto the 100-year floodplain. As design plans are finalized, additional opportunities to steepen slopes will be explored. The fill-side walls have been included in the current design to reduce the fill-slope impacts to wetlands, the river and floodplains. As design progresses, opportunities to regrade and vegetate floodplain benches will be incorporated where the benefit to do so is cost effective.

Based on modeling, the conceptual design would not cause the 100-year water surface elevations to increase over the Ravalli County 0.5-foot allowance. The project improvements are not anticipated to encourage development within the 100-year floodplain. This project will be designed in accordance with Ravalli County floodplain regulations and will not increase the 100-year water surface elevations over the allowable 0.5-foot allowance. The project will be in compliance with Executive Order 11988, Floodplain Management, which requires federal agencies to avoid direct or indirect support of development in floodplain whenever a practical alternative exists.

3.13.3 FLOODPLAIN MITIGATION

Coordination will continue to occur with the Ravalli County Floodplain Administrator, FEMA, and the U.S. Army Corps of Engineers to ensure compliance with regulations and that mitigation measures are included in the construction plans. Designs and recommendations will be in compliance with FHPM 6-7-3-2 "Location and Hydraulic Design of Encroachments on Floodplains" (now referenced as 23 CFR 650 A) and Executive Order 11988. Revegetating disturbed vegetated floodplain areas would offset any potential impact to "natural and beneficial floodplain values" and would enhance current conditions.

A floodplain permit would be required from Ravalli County prior to construction within the floodplain.

3.14 Threatened or Endangered Species

3.14.1 AFFECTED ENVIRONMENT

Under Section 7 of the Endangered Species Act (ESA), as amended, activities conducted, sponsored, or funded by federal agencies must be reviewed for their effects on species federally listed or proposed for listing as threatened or endangered and any designated critical habitat for these species. Based on the United States Fish and Wildlife Service (USFWS) list of threatened, endangered, and proposed species that may be present in Montana Counties, and on range and habitat descriptions found in technical literature, the following listed, proposed, and candidate species were considered for the study area. These species are threatened bald eagle, grizzly bear, Canada lynx, and bull trout (and proposed critical habitat) and threatened gray wolf.

Bald Eagle (*Haliaeetus leucocephalus*)

The study area is not within the general home range for active bald eagle nests. Active nest sites are present several miles north of the study area between Florence and Hamilton, but nesting habitat does not sufficiently exist within the study area. Bald eagles winter in the study area and feed on fish in the East Fork Bitterroot River and road-killed big game animals along Highway 93. Migratory bald eagles are also likely to be present in the study area.

Grizzly Bear (*Ursus arctos horribilis*)

Although grizzly bears have been extirpated from the Bitterroot ecosystem, the study area is near a grizzly bear recovery area identified in the 1993 Grizzly Bear Recovery Plan. A federal reintroduction plan is currently under legal challenge. No recent grizzly bear activity has been reported within the study area; however, in September 2002, a grizzly bear was observed in the Rock Creek drainage.

Canada Lynx (*Lynx canadensis*)

Typical Canada lynx denning and foraging habitat is not present in the study area. Canada lynx, moving between preferred high elevation habitat of the Bitterroot and Sapphire Ranges, may occasionally occur in the study area. Highway crossing by this species is thought to be more common in the Lost Trail Pass vicinity, south of the study area.

Bull Trout (*Salvelinus confluentus*)

Within the study area, bull trout are present in East Fork Bitterroot River and Laird Creek. Electro shocking in the East Fork Bitterroot River produced six bull trout in 1998 and one in 2001. The fires of 2000 are likely to have reduced Laird Creek bull trout populations.

The study area is within the Columbia River Basin bull trout critical habitat proposed by the USFWS. Critical habitat is protected under Section 7 of the Endangered Species Act, and federal agencies are required to consult with the USFWS on actions they carry out, fund, or authorize that might affect this habitat. East Fork Bitterroot River is included in this proposal, and Laird and Medicine Tree Creeks are not included.

Gray Wolf (*Canis lupus*)

Although gray wolves could occur in the study area, no critical habitat features are present within several miles of the project. Packs were reported in 2002 outside the study area in both the upper East Fork and West Fork Bitterroot drainages. In 1998 a single wolf was killed on Highway 93 north of the study area between Lolo and Missoula.

3.14.2 THREATENED OR ENDANGERED SPECIES IMPACTS

No-Action Alternative. The No-Action Alternative would have no effect on threatened or endangered species.

Preferred Alternative. The following are possible impacts associated with the Preferred Alternative on each of these species. The results of this analysis are summarized in **Table 3-15**. Formal consultation with the USFWS has been initiated for this project. The project decision document will be developed following receipt of the biological opinion and is expected to include Canada lynx's critical habitat designation.

Table 3-15
Summary of Impacts to Threatened and Endangered Species

| Species | Scientific Name | Status | Impact Determination |
|--------------|---------------------------------|------------|--|
| Bald eagle | <i>Haliaeetus leucocephalus</i> | Threatened | May affect, not likely to adversely affect |
| Grizzly bear | <i>Ursus arctos horribilis</i> | Threatened | No affect |
| Canada lynx | <i>Lynx canadensis</i> | Threatened | May affect, not likely to adversely affect |
| Bull trout | <i>Salvelinus confluentus</i> | Threatened | May affect, likely to adversely affect |
| Gray wolf | <i>Canis lupus</i> | Threatened | May affect, not likely to adversely affect |

Bald Eagle (*Haliaeetus leucocephalus*)

The proposed action does not fall within the home range of any known Bald Eagle nests, and therefore, no impacts to nesting eagles are anticipated. Impacts to potentially suitable nesting habitat are considered negligible as well.

Exposure of soils associated with project activities could result in temporary increases in turbidity in the East Fork of the Bitterroot River and its tributaries. Water quality would be indirectly affected over the short term by the influx of fuel and other pollutants from unpaved surfaces during storm events. Increases in turbidity and suspended sediment could result in reductions of stream productivity and reduction of feeding opportunities for sight-feeding species, including Bald Eagles. These temporary impacts would be reduced by implementing standard best management practices for pollutant/sediment/erosion control during construction

and through compliance with project-specific conditions to be specified in the MFWP Stream Protection Act and federal Section 404 Clean Water Act permits required for the project.

Due to the year-round presence of bald eagles along the project route, construction activities during all seasons could conceivably temporarily disturb or displace eagles where the project is visible from nesting, roosting and foraging habitat. However, because the areas and duration of disturbance would be relatively confined and occur in a currently disturbed corridor, and undisturbed similar habitat for displaced birds is abundant in the surrounding area, these impacts are not considered substantial.

Increased vehicle speeds resulting from highway improvements would increase the risk of mortality due to vehicle collisions with eagles feeding on highway carrion; however, highway improvements would also increase motorist's visibility of eagles on or near the highway and facilitate avoidance of collisions. Prompt removal of roadkill deer and other wildlife from the highway would further reduce the potential for such collisions.

Based on this information and recommended mitigation/coordination measures below, it is determined that implementation of the Preferred Alternative **may affect, not likely to adversely affect** the threatened bald eagle.

Grizzly Bear (*Ursus arctos horribilis*)

The primary effects of road presence, under both the existing and "improved" conditions, with respect to this species are the potential for direct mortality and slowing or discouraging east-west movement between suitable habitat areas. Impairment of such movement between populations contributes, in essence, to habitat fragmentation. Isolation of grizzly populations is not a concern at this time in the Bitterroot Valley, as the populations do not currently exist; however, the highway could serve to isolate populations should grizzlies naturally or through reintroductions become established in the Bitterroot and Sapphire ranges. The establishment of wildlife crossings at bridges could serve to mitigate the impacts of the highway on grizzly movements across the valley.

Based on this information outlined, it is determined that implementation of the Preferred Alternative will have **no affect** on the threatened grizzly bear, even upon reintroduction.

Canada Lynx (*Lynx canadensis*)

Potential lynx habitat loss resulting from the Preferred Alternative is considered a less-than-substantial impact because little or no quality lynx habitat occurs within proposed project limits. The primary effects of road presence, under both the existing and "improved" conditions, with respect to this species are the potential for direct mortality and slowing or discouraging east-west movement between suitable habitat areas. Impairment of such movement between populations contributes, in essence, to habitat fragmentation. Habitat fragmentation isolates populations and leads to losses of genetic diversity.

Assuming that lynx movement across the highway occurs in the project area, increased vehicle speeds on the improved road may increase the chance for vehicle-inflicted mortality. Widening, however, would increase sight distance and may improve opportunities for drivers to change lanes and avoid animals. Additionally, the nocturnal habits of lynx may serve to reduce the

chance of vehicle-inflicted mortality because lowest traffic volumes are expected during evening hours. Lynx may be active during daylight hours, but are most active from shortly before dark to shortly after dawn (Nellis 1989).

The incorporation of wildlife passage features at bridge crossings may potentially help facilitate lynx movement across Highway 93 through the project area.

Based on this information, and recommended mitigation/coordination measures below, it is determined that implementation of the proposed action **may affect, not likely to adversely affect** the Canada lynx.

Bull Trout (*Salvelinus confluentus*)

The *USFWS Dichotomous Key For Making Endangered Species Act Determinations of Effect from a Framework to Assist in Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Bull Trout Subpopulation Watershed Scale* (USFWS 1998) was applied in making the determination of effect.

Construction of the Preferred Alternative would have short and potentially long-term adverse impacts on proposed bull trout critical habitat in the East Fork Bitterroot River and known permanently occupied habitat associated with the Laird Creek drainage. Impacts to project area streams will primarily result from direct disturbance associated with the removal of the existing structures (bridges and culverts), construction of the new structure at each crossing, and direct channel modifications as needed to construct the previously mentioned fill-side walls. Potential reactivation of an existing cutoff meander would also result in short term negative impacts with the potential for long-term benefits to the East Fork Bitterroot River drainage. Existing impacts from sand/gravel use during the winter months and general highway runoff are expected to continue following construction.

Construction activities would result in temporary increased erosion potential, reduced slope stability, and could temporarily increase turbidity in the river downstream of the project; particularly during precipitation events. Widening the paved surface of the highway would result in increased runoff and incremental increased flow into the East Fork Bitterroot River drainage. Increased exposure of soils in the project area would provide a continuing source of sediment into the local system during precipitation events until stabilized.

Two additional bridges may be required for the project should MDT receive approval from local residents and decide to reactivate a previously cut-off meander channel. Depending upon the location of such bridges, temporary detours and/or work bridges may become necessary. Regardless of number and location, temporary facilities generally result in temporary turbidity into the local system during installation and removal of end bents and instream piers. The contractor will be responsible for permitting temporary facilities. If clear span structures at bridge crossings are used, the only anticipated in-stream activities associated with construction of the new bridges would be end bent construction and riprap placement where needed.

Conducting in-stream work during low-flow conditions and diverting water during construction should reduce or eliminate most short-term increases in turbidity for Laird and Medicine Tree

Creeks, which are scheduled for new culverts. In the East Fork Bitterroot River, conducting in-stream work during low-flow conditions should reduce most short-term increases in turbidity.

While short-term negative impacts are probable with this project, the aquatic environment may also benefit from the Preferred Alternative. Reactivation of a cutoff meander would add length to the East Fork Bitterroot River, thus improving flow dynamics and increasing aquatic habitat for fish and other wildlife. Revegetation efforts adjacent to the river would help stabilize banks, add shading to the river, and increase the long-term potential for woody debris recruitment into the drainage.

Based on extensive coordination with the U.S. Fish and Wildlife Service and Montana Fish, Wildlife, and Parks, and implementation of specified conservation measures, a **may affect, likely to adversely affect** determination is rendered for bull trout and proposed critical habitat for this species. This determination primarily results from the potential, albeit low, for “take” of individual fish and for temporary degradation of proposed critical habitat during construction. Formal consultation has been initiated with the U.S. Fish and Wildlife Service.

Bull Trout (*Salvelinus confluentus*) Critical Habitat

In November 2002, the USFWS, proposed designation of critical habitat for the Klamath River and Columbia River distinct population segments (DPS) of bull trout pursuant to the Endangered Species Act of 1973, as amended. Critical habitat consists of physical and biological features essential to the conservation of the species and that may require special management considerations or protection. These physical and biological features include, but are not limited to: space for individual and population growth, and for normal behavior; food, water, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The primary constituent elements for bull trout were determined from studies of their habitat requirements, life-history characteristics, and population biology. Primary constituent elements may include, but are not limited to, features such as spawning sites, feeding sites, and water quality or quantity. An area need not include all nine of the primary constituent elements to qualify for designation as critical habitat.

The proposed Conner North and South project includes work within the East Fork Bitterroot River, which is proposed critical habitat for bull trout. The remaining Bitterroot River tributaries traversed by this project are not proposed for listing as critical habitat. The East Fork Bitterroot River from its junction with the West Fork upstream to its headwaters provides foraging, migratory, spawning (in headwaters) and over-wintering habitat for bull trout.

Analysis for the proposed Conner North and South project found that activities associated with this project were likely to impact the Habitat Indicators **Sediment** and **Substrate Embeddedness**. This impact is anticipated to result in degradation to these habitat elements and subsequently primary constituent elements (PCEs) 1 and 4. The impacts associated with the proposed action are not discountable, insignificant, or entirely beneficial. As such, the proposed Conner North and South project is **likely to adversely affect** proposed critical habitat for bull trout in the Bitterroot River. Due to the scale of the project and associated impact, there

is an extremely low probability that the Conner North and South project will result in destruction or adverse modification of proposed critical habitat for bull trout at the Columbia River DPS scale.

Gray Wolf (*Canis lupus*)

No active wolf dens are known to occur in the project area. Due to the general lack of wolf pack activity in the immediate project area, breeding, denning, and other reproductive functions are not likely to be affected by the project.

Potential wolf habitat loss resulting from the project is considered a less-than-substantial impact due to the high disturbance levels associated with existing roadside vegetation communities. The primary effects of road presence, under both the existing and “improved” conditions, with respect to this species are the potential for direct mortality and slowing or discouraging possible occasional west-east cross-highway movement. Impairment of such movement between populations contributes, in essence, to habitat fragmentation.

Based on this information and the occurrence outlined in Section 3.14.1, it is determined that implementation of the proposed action **may affect, not likely to adversely affect** the gray wolf.

3.14.3 CONSERVATION MEASURES

No conservation measures are required for the grizzly bear.

Conservation measures will be implemented for the following species:

Bald Eagle (*Haliaeetus leucocephalus*)

- Prior to construction, bald eagle nesting status in the study area will be confirmed through coordination with local resource agency biologists and a review of MNHP records. If nests are present, appropriate special and temporal construction restrictions may be warranted depending on nest location.
- Location of construction-related activities (i.e., staging, borrow/gravel source) is independently determined by the construction contractor, who is responsible for compliance with all laws and restrictions associated with these activities. If MDT becomes aware of any threatened, endangered, proposed, or candidate species located in the vicinity of these activities, they will inform the contractor of the locations and potential restrictions that may be associated with avoiding impacts to those species. MDT will recommend that the contractor contact and coordinate with the U.S. Fish and Wildlife Service.
- Raptor proofing of rural overhead power lines that are relocated in association with the project will be included in accordance with MDT policies. This policy requires that any overhead electrical facilities, except those in specifically designated urban areas, that are relocated within the public right-of-way must be raptor proofed. Any overhead electrical facilities that are relocated on private right-of-way will be recommended to be raptor proofed.

Bull Trout (*Salvelinus confluentus*)

- With respect to the clear zone, no clearing of woody vegetation would occur within the riparian zone along study area streams beyond the area absolutely necessary for safety or construction of the new roadway.
- Any restrictions on work near streams or in wetlands will be specified as terms of water-related permits obtained from the MDEQ, MFWP, and the Corps.
- Removed culverts, guardrail, and other items will not be stockpiled in or adjacent to wetland or stream areas.
- To minimize sedimentation as well as construction hardship, it is recommended that, if possible, construction in and adjacent to wetlands and streams be timed for these sites to be as “dry” as possible during construction.
- Construction equipment operating in wetlands will be limited to that which is needed to perform the necessary work.
- Width of temporary construction easements will be minimized to the extent possible in wetland and stream areas.
- Disturbed wetland and streamside areas will be revegetated with native plant material (when available).

Gray Wolf (*Canis lupus*) and Canada lynx (*Lynx canadensis*)

- With the exception of temporary clearing that may be required for culvert placement and relocation of utilities, clearing and grubbing will be confined to the construction limits (i.e., within the cut/fill limits). Clearing beyond defined construction limits will be kept to the minimum necessary for the completion of the project. Any temporary clearing necessary for culvert placement outside the construction limits or temporary facilities will be kept to the smallest area possible and reclaimed with desirable vegetation as soon as practicable.

3.15 Cultural Resources and Section 4(f)

3.15.1 AFFECTED ENVIRONMENT

This section addresses cultural resources within the study area. Pursuant to Section 106 of the National Historic Preservation Act (as amended) and the Advisory Council on Historic Preservation regulations 36 CFR Part 800, a cultural resource survey, literature review, and report were completed for the study area.

The first cultural resource inventory was completed in 1989 when the Montana Department of Transportation contracted with Historical Research Associates (HRA) of Missoula, Montana. The study reported thirteen prehistoric and historic cultural resource properties within the study area. One additional site was added to the historical inventory in 1990 when HRA prepared an addendum, and recorded a site in the vicinity of the Medicine Tree. HRA identified two sites within the study area that were determined to be eligible for the National Register of Historic Places (NRHP):

- **Site 24 RA 281 Whitesell Irrigation Ditch Flume** was constructed in the late 1880's or early 1890's. The site is an excellent example of a timber box and trestle-type flume. The flume remnants of the abandoned Whitesell irrigation ditch are eligible for the NRHP. The ditch remnants are located approximately 150 feet east of the roadway on a steep side slope.
- **Site 24 RA 513 Medicine Tree** is a culturally significant site considered sacred by the regional Native American groups and is protected under the American Indian Religious Freedom Act (AIRFA, 1978) and the National Historic Preservation Act (1966). The Medicine Tree was listed on the NRHP in April 1995. The site boundaries include the 25 acres immediately surrounding the tree east of the highway.

After the wildland fires in the summer of 2000, Tracks of the Past Historical and Archaeological Services conducted an update of the 1989 cultural resource inventory of sites dating from 1945 to 1955. The nine-mile long project corridor was inventoried, covering 200 feet in each direction from the highway centerline. The re-evaluation of the study area revealed an additional seven historic sites (six residences and one business), but only one was eligible for listing on the National Register of Historic Places. Of the seven sites in the update report, one site may be determined to be individually eligible for listing on the National Register: Joe's Bitterroot Ranch, (24 RA 0665) a.k.a. Rocky Knob Lodge.

Table 3-16 lists the National Register of Historic Places (NRHP)-eligible or listed sites within the project corridor.

Table 3-16
NRHP Eligible or Listed Sites

| Site # | Site Description | NRHP Eligibility | Within Area of Potential Effect |
|------------|----------------------------------|------------------|---------------------------------|
| 24 RA 281 | Whitesell Irrigation Ditch Flume | Eligible | Yes |
| 24 RA 513 | Medicine Tree | Listed | Yes |
| 24 RA 0665 | Joe's Bitterroot Ranch | Eligible | Yes |

3.15.2 CULTURAL RESOURCES IMPACTS

No-Action Alternative. No NRHP Eligible or listed properties will be impacted by the No-Action Alternative.

Under the No-Action Alternative there would be no changes made to the project corridor and therefore no impacts to the resources. Therefore, with the No-Action Alternative there would be no direct, indirect or constructive use impacts to historic properties on or eligible for inclusion on the NRHP. Since no property takings or constructive use has been identified to publicly owned parks and recreational areas, no further analysis of these resources is required under Section 4(f).

Preferred Alternative:

- **Site 24 RA 281 Whitesell Irrigation Ditch Flume.** As noted in the 1989 HRA report, approximately 20 percent of the entire length of the Whitesell Ditch was modified during the construction of US 93. It was determined that the portion of the ditch that would likely be affected by the proposed action would be those sections that were already modified. The flume is located outside the construction disturbance area.

The State Historic Preservation Officer (SHPO) concurred on June 6, 1995 with MDT's Determination of **No Effect** for the site.

- **Site 24 RA 513 Medicine Tree.** The 1995 EA assessed Alternative E, which was a relocated alignment in the area of Medicine Tree, as the preferred alternative. The current preferred alternative (Alignment D) maintains use of the current US 93 highway, incorporating a shift of 12 feet to the west away from the Medicine Tree. MDT prepared a new Determination of **No Effect** in a letter to the SHPO dated February 26, 2003. The proposed design also includes a privacy wall to create a more protected space for the Medicine Tree and adjacent property considered sacred by the regional Native American groups.
- **Site 24 RA 0665 Joe's Bitterroot Ranch.** No impacts to the historic structure are anticipated with the proposed action. A determination of **No Effect** was made in a letter to the SHPO dated February 26, 2003.

This information, along with a determination of effect, was contained in a letter to the SHPO dated February 26, 2003 (see Appendix A). The SHPO concurred with the determination of Effect on March 13, 2003.

In the event that previously unrecorded cultural material is found during construction, activities in the immediate area would be halted and the MDT archaeologist would be contacted to assess the find. Terms and conditions agreed to in the draft Memorandum of Agreement (MOA) between the Confederated Salish and Kootenai Tribes and MDT would be adhered to during construction, particularly in the study area near the Medicine Tree.

3.15.3 CULTURAL RESOURCES MITIGATION

No mitigation measures are required.

3.16 Hazardous Waste Sites

An assessment was conducted to evaluate the potential for encountering contaminated materials during construction within the study area. The assessment utilized information obtained from a Montana Department of Environmental Quality (DEQ) record review, interviews, aerial photograph interpretation and visual site assessment.

3.16.1 AFFECTED ENVIRONMENT

Results of the visual site assessment, aerial photograph interpretation and DEQ records review did not reveal any potential hazardous materials sites in the vicinity of the study area. Interview with the owner of the Outpost Lodge indicated that a fuel station, Travelers Village, was located directly across US 93 from the existing Outpost Lodge.

Potential contributors of contamination include:

- **Former Travelers Village Fuel Station**—At the present time MDEQ has no available information regarding this site. No existing building or fuel pumps present as the site, site was discovered as a result of a local interview. Visual inspection of the site did not reveal any visible fuel lines or stained soil. The potential to encounter petroleum-contaminated soil exists at this location.

3.16.2 HAZARDOUS WASTE IMPACTS

No-Action Alternative. No impacts to hazardous waste would occur with the No-Action Alternative.

Preferred Alternative. The highway is being widened to the opposite side of the road in the area of the former Travelers Village Fuel Station. Therefore, no impacts to hazardous waste are anticipated with the Preferred Alternative.

3.16.3 HAZARDOUS WASTE MITIGATION

Hazardous materials, including fuel and lubricating oils will not be stored and construction equipment will not be fueled within 50 feet from the highest anticipated water level (MDT Standard Specification 208.03.04) or as identified as part of permit conditions, whichever is more restrictive.

3.17 Visual Resources

3.17.1 AFFECTED ENVIRONMENT

The foreground along the East Fork Bitterroot River is characterized by gentle slopes and river bottom. The middle ground is steep slopes with Douglas fir and ponderosa pine tree stands. US 93 provides road and trail access for many recreation sites on the forest.

While this highway offers outstanding scenic and recreational opportunities, it also serves a utilitarian purpose for public and commercial transport.

Landscape Character

Landscape character can be broken down into landscape units that contain similar landscape elements that are different from other distinct areas. The foreground landscape units are those immediately visible from the highway and describe the local character of the area. The

foreground is defined as the area within 0 to 0.5 mile. The foreground views along the East Fork Bitterroot River and US 93 are characterized by gentle slopes and river bottom. The middleground is defined as 0.5 mile to 4 miles from US 93. The middleground has steeper slopes with open timbered land. Much of US 93 within the project corridor is bounded by mountains on one side and the river on the other. The background views are four miles or greater. Background landscape units fall within the surrounding mountain ranges. Along a large portion of the project corridor, background views are contained within this viewshed.

The visual landscape units within the project corridor are defined as:

- **Grassland/Floodplains.** These areas are open, flat to rolling terrain. Some of these areas in particular provide an open vista, which enhances the scenic quality. Grazing activities occur on some of the Forest Service land along the project corridor. The forage produced in these grassland and meadows is available for both wildlife and domestic stock. Most of these parcels are privately owned (see Photo 3-1).



- **Riparian.** The riparian areas in the project corridor are primarily associated with the East Fork Bitterroot River. The riparian areas typically are vegetated with trees and understory species, increasing the scenic variety. These areas have a higher visual scenic quality and support recreation and wildlife habitat functions. The vegetation serves to protect water quality and fish habitat (see Photo 3-2).



- **Coniferous Forest and Rock Outcropping.** The Bitterroot National Forest consists of largely ponderosa pine and Douglas fir trees. Other species include spruce, Douglas fir and ponderosa pines (see Photo 3-3). Several locations along the corridor include rock outcroppings provide a variety to the view that increases the scenic quality (see Photo 3-4).





Photo 3-4
Rock Outcropping Slopes Adjacent to US 93

- **Rural Homesites.** Rural homesites are dispersed throughout the project corridor and include homes and outbuildings commonly found in rural/agrarian communities. Some homesites are accessed by individual bridges/roads across the river (see Photo 3-5).



Photo 3-5
Rural Homesites adjacent to US 93

- **Commercial.** Commercial Development is very limited within the project limits. A small number of commercial businesses, such as restaurants or motels are located within the corridor.

Visual Quality Objectives

The Bitterroot National Forest Plan identifies visual quality objectives (VQO) for the management area adjacent to the project corridor. The minimum standards for visual quality are listed below by management area. Activities must meet this standard or one for a higher degree of visual quality. The Bitterroot National Forest visual quality objective for the National Forest System (NFS) land adjacent to US 93 are designated Management Area 3a and 11c (Lewis & Clark National Historic Trail).

- Management Area 3a management goal is to maintain the “partial retention” objective and to manage timber.
- The 11c designation is considered visually sensitive and is to maintain “partial retention” of visual quality characteristics. The Bitterroot National Forest Plan identifies the 11c Management Area as an “avoidance” area that excludes the construction of utility lines. This is located for a very small distance in the southern section of the project corridor within a Management 3a area. However, Management Area 3a allows utility construction that meets the visual quality objectives.

The minimum standards for visual quality (partial retention, modification, etc.) describe the maximum degree of acceptable alteration (impact) of the natural landscape based on the importance of aesthetics to the management activity. The degree of alteration is measured in terms of visual contrast with the surrounding landscape. “Partial retention” activities may introduce form, line, color, or texture but they should remain subordinate to the visual strength of the landscape. Mitigation measures to meet “partial retention” should be accomplished as soon after project completion or at a minimum within the first year.

3.17.2 VISUAL IMPACTS

No-Action Alternative. The No-Action Alternative would not create any additional visual impacts.

Preferred Alternative. The previously identified visual quality objectives create a baseline which to assess the project impacts against. Visual impacts associated with the Preferred Alternative will be both short-term as well as long-term. Short-term visual impacts include:

- Construction equipment and excavated material associated with construction in the staging areas.
- Dust and debris associated with construction activity. The dust will be kept to a minimum and controlled by dust suppression techniques to minimize related visual and air quality impacts.
- Traffic congestion and detours associated with construction activity and detours.

The short-term and long-term visual impacts and implemented mitigation would be consistent with the “partial retention” classification. Long-term visual impacts associated with the Preferred Alternative include:

- Highway reconstruction: A wider pavement width from 24 feet to 40 feet. The proposed alignment generally follows the existing roadway. Visual impacts as a result of this improvement are:
 - ◇ Additional pavement width from widened shoulders. The expanded pavement width will increase the motorist's foreground view of the roadway from that which currently exists. However, the improved safety associated with wider shoulders and standard lane widths should enhance the motorist's driving experience. The wider shoulders also provide more opportunities for motorists to pull-off for sight seeing activities. In addition, the highly scenic nature of the corridor will draw the motorist's attention away from the subordinate views of the pavement.
 - ◇ The steepest side slopes will be allowed only in areas with stable material that can be blended with the existing slopes and where little or no vegetation currently exists. The intent is to minimize disturbance to areas that are currently vegetated and avoid unstable material.
 - ◇ Loss of vegetation. A loss of vegetation will occur in most mountainous areas due to cut slopes and areas adjacent to the river due to fill slopes or fill-side walls. With the exception of temporary clearing that may be required for culvert placement and relocation of utilities, clearing and grubbing will be confined to the construction limits (i.e., within the cut/fill limits). Clearing beyond defined construction limits will be kept to the minimum necessary for the completion of the project. Any temporary clearing necessary for culvert placement outside the construction limits or temporary facilities will be kept to the smallest area possible and reclaimed with similar desirable vegetation as soon as practicable.
- Highway and Structure Elements:
 - ◇ Right-of-Way (ROW) fence is an existing element and fencing would be similar upon reconstruction.
 - ◇ Addition of guardrail at the top of slopes steeper than 3:1 horizontal:vertical.
 - ◇ Fill-side walls are proposed along the project corridor as a means to reduce impacts to the East Fork Bitterroot River and associated vegetation. Fill-side walls adjacent to drainages may be seen from adjacent lands and a number of vantage points along the project corridor. Motorists traveling US 93 will see fill-side walls in various locations throughout the project corridor.
- Construction Activities:
 - ◇ The views of the construction staging areas by travelers on US 93 would be temporary and of brief duration during construction. Equipment, stockpiles and supplies would be visible as motorists pass the construction staging areas.
 - ◇ Excess waste material may be located within or outside the right-of-way. Stockpile locations have not been identified and the contractor will be required to secure and coordinate these locations with the landowner.

3.17.3 VISUAL RESOURCE MITIGATION

- Design and/or place all structures to be compatible with the characteristic landscape.

3.18 Parks and Recreation

3.18.1 AFFECTED ENVIRONMENT

The Bitterroot Valley offers a wide variety of outdoor recreational opportunities for both the residents in the area and those who visit the Valley. These opportunities include hiking, bicycling, horseback riding, mountain biking, camping, hunting, fishing, wildlife viewing, skiing and snowmobiling. US 93 is used to commute through the valley to and from the southeast recreation destinations.

A primary trail within the study area is the Lewis & Clark National Historic Trail. In September of 1805, Meriwether Lewis and William Clark (better known as Lewis and Clark) traveled through the study area on their famous 28-month "Corps of Discovery" journey from Camp DuBois, Illinois to explore the western half of the continent in search of the fabled Northwest Passage to the Pacific Ocean. The Lewis and Clark journey through the study area took place on the current US 93. They paralleled the river during their journey camping on the west side of the river going to the Pacific Ocean and on the east side on their return journey. A precise location is not documented for the Lewis & Clark trail.

Due to the significance of the Lewis and Clark journey to the exploration of the western United States, the trail was named a National Historic Trail in 1978. "The primary purpose of a National Historic Trail is commemoration of the historic events that form the Trail's central theme through historic interpretation, preservation, and public use" (ParkNet, 2001). The National Park Service does not own any portion of the trail, but administers it in cooperation with federal, state, and local agencies, non-profit organizations, and private landowners. These entities manage "existing retracement routes, recreation sites, interpretive facilities, and visitor centers along the route" (ParkNet, 2001).

There are no additional national, state, county, or city parks or recreation areas located within the study area.

Presently, US 93 is used for agriculture and commercial transportation, recreational access, tourist travel, and other general highway uses. Though designated as part of a transcontinental bike route, the lack of wide shoulders and visibility restrictions caused by horizontal and vertical curvature does not provide a safe pathway for pedestrians or bicyclists. The current roadway was constructed in 1936 and 1937, with improvements in 1939. The 65-year old roadway has considerable amounts of wear including cracking, rough areas due to patching, and minimal shoulders.

3.18.2 PARKS AND RECREATION IMPACTS

No-Action Alternative. The No-Action Alternative would have no direct effect on recreational resources in the study area, other than lack of improvements will not offer safer travel for bicyclists, pedestrians, or to recreational sites accessed by the highway. No improvements would be made with the No-Action Alternative and the narrow shoulders would be perpetuated, therefore making the pedestrian and bicycle traffic less able to negotiate the highway with the future projected traffic.

Preferred Alternative. The Preferred Alternative would have no direct impacts to recreation resources within the study area. Improvements associated with the Preferred Alternative would provide safer travel conditions for bicyclists, pedestrians and those utilizing the corridor to reach outlying recreation destinations. The widened eight-foot shoulders will provide a usable shoulder for pedestrians and bicyclists. Safer driving conditions with the wider shoulders would provide safe access to the fishing access sites and for sightseers. No additional fishing access sites are proposed.

The Preferred Alternative will comply with the American with Disabilities Act (P.L. 101-336).

3.18.3 PARKS AND RECREATION MITIGATION

No mitigation is required for park and recreation resources.

3.19 Section 4(f)/6(f)

Section 4(f) applies to publicly owned lands which are managed as parks and recreation areas, wildlife or waterfowl refuges, and to all "significant" historic sites regardless of ownership. Impacts to Section 4(f) resources resulting from the project improvements must be avoided if possible. If avoidance is not feasible and prudent, then all possible planning to minimize harm to these resources must be included in the project. Protection of these resources is covered by Section 4(f) of the Department of Transportation Act of 1966, P.L. 89-670, 80 Stat.934, which was amended in 1983 and 1987, and is now codified at 49 U.S.C. 303.

The pertinent section of the law states:

(C.) The Secretary of Transportation may approve a transportation program or project (other than any project for a park road or parkway under Section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if

(1) there is no prudent and feasible alternative to using that land; and

- (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from such use.

The FHWA has adopted regulations (23 CFR 771.135) to guide implementation of this section of federal law. This regulation clarifies that the requirements of Section 4(f) apply only to historic properties on or eligible for the National Register of Historic Places (NRHP) unless the Federal Highway Administration determines otherwise. NRHP sites are also protected by Section 106 of the National Historic Preservation Act (NHPA), which requires federal agencies to consult with the State Historic Preservation Officer (SHPO) regarding the effect of their undertaking on historic properties.

There are two types of impacts to a designated 4(f) property that require an evaluation and determination as set forth in the regulations:

- A direct impact to a Section 4(f) property resulting from the taking of a portion or all of the property.
- Any action by the project, while not amounting to a direct taking, which would “substantially impair” the current use of the property by such intrusions as noise, air or visual impacts, as well as impairment of property access, could constitute a “constructive use” of the 4(f) property.

The Section 4(f) resources in the study area are historical resources. There are no wildlife or waterfowl refuges or parks along the corridor.

Montana Fish, Wildlife and Parks was contacted regarding any Section 6(f) properties being located within the project corridor. Section 6(f) sites are properties purchased or with improvements using Land and Water Conservation (LAWC) funding. Fishing access sites often have LAWC funding. No sites were identified within the project limits. However, a new Fishing Access Site is located just north of the project corridor near Chaffin Creek Road/ US 93 and the East Fork Bitterroot River.

3.19.1 SECTION 4(f) IMPACTS AND MITIGATION

The historical and cultural Section 4(f) resources described in Section 3.15.2 are not “used” by the Preferred Alternative under Section 4(f). Since there is no use of a Section 4(f) resource there is no requirement for any mitigation under 23 USC §138. However, under the Section 106 and the MOA entered into, mitigation was agreed to for the Medicine Tree. Measures to minimize harm have been incorporated into the project design and are described in Section 3.15.3. Section 4(f) requires that federal transportation projects that must take or use property from a protected resource include all possible planning to minimize harm to those properties. To accomplish this, coordination has taken place with the Confederated Salish and Kootenai Tribal (CSKT) Preservation Officer. Coordination will continue prior to and during construction to ensure conditions agreed to in the draft MOA are met. The project has incorporated the privacy wall to minimize project and traffic impacts to the Medicine Tree. In addition, CSKT tribal

staff have been involved in the conceptual site plan for the privacy wall in the Medicine Tree area.

In addition, there are no parks or recreation areas or wildlife or waterfowl management areas within the corridor pertinent to Section 4(f) coordination.

3.19.2 SECTION 6(f) IMPACTS

No impacts to Section 6(f) properties will occur as a result of implementation of the Preferred Alternative.

3.20 Construction

3.20.1 CONSTRUCTION IMPACTS

Traffic Control

Traffic control will be maintained for the duration of the construction with appropriate signing, flagging and detours in accordance with the manual on *Uniform Traffic Control Devices*. Traffic control measures will be developed to maximize safety and minimize inconvenience to local traffic. The plan will include details of how traffic will be maintained through the construction areas. For example, at locations where culverts are installed it may be necessary to install temporary culverts at stream crossings until the old culvert can be removed and the new one installed. Due to the narrow construction work area, there will be sequencing required for fill-side wall construction. Timing and schedule of construction may vary to accommodate issues associated with the ESA-protected bull trout. During construction safe passage of traffic will be through controlled corridors within the construction zone.

It is anticipated that most delays and inconvenience would occur within two construction seasons. Delays through the corridor would occur frequently during the first year to allow one-way traffic through narrow construction areas and to allow clearance and passage of trucks and other construction equipment. Few longer delays are anticipated and will not be allowed except where necessary, for example due to rock blasting.

Waste Disposal

Wastes generated during construction will include—asphalt pavement, guardrails, and culverts from obliteration of the old highway; and wastes associated with contractor equipment such as fluid from vehicle maintenance activities. Disposal of existing asphalt and Portland cement concrete will comply with applicable laws, rules and regulations, including the Montana Solid Waste Management Act.

Heavy equipment and machinery commonly employed in large construction projects are fueled and lubricated with petroleum products whose storage, handling and disposal are regulated by the MDEQ and the U.S. EPA. Best Management Practices (BMPs) require that contractors follow maintenance guidelines and standards on all equipment to prevent casual release of toxic or hazardous substances into the environment. The BMPs will restrict equipment fueling to a distance greater than 50 feet from the highest anticipated water level or as stated in permit

conditions, if more restrictive. These restrictions will be specified as conditions in permits issued by the MFWP and the U.S. Army Corps of Engineers.

Dust abatement

A temporary increase in air pollution due to dust and fumes is expected as a result of construction operations. The contractor will be required to adhere to all federal, state and local regulations to minimize dust pollution. The contractor will obtain air quality permits from the Montana Department of Environmental Quality's (MDEQ) Air and Waste Management Bureau for asphalt plants and crushers. Dust will be controlled by watering and other acceptable methods.

Stockpiles

Topsoil, aggregate and recovered asphalt pavement may be stockpiled during construction. Stockpile locations have not been identified for these materials, however the contractor will be required to implement BMPs to ensure these materials do not affect the environment.

Gravel Pits and Reclamation

An aggregate source has not yet been identified. It is anticipated that the aggregate source(s) for construction of road bases and preparation of asphalt mixes will be identified within the general vicinity of the proposed project. Development of an aggregate source site requires that the contractor obtain an open cut-mining permit from the MDEQ. Bond must accompany the permit application. In addition, the contractor must submit a reclamation plan to the Board of Land commissioners for review. Excavation cannot begin until a permit is obtained and the reclamation plan is approved.

Reclamation, as defined in MCA 82-4-403, is the "reconditioning of an area of land affected by mining operations to make the area more suitable for productive use, including but not limited to forestry, agriculture, wildlife, recreation or residential and industrial sites." A reclamation plan includes "the description of current land use, topographical data, water data, soils data, leased areas, and intended mine areas and an explanation of proposed reclamation of the land, including appropriate maps."

Regulatory Compliance

Activities during all phases of construction must comply with all applicable tribal, county, state and federal regulations.

3.20.2 CONSTRUCTION MITIGATION

Construction Mitigation Measures for Air Quality

- Suppress dust through watering or dust palliative.
- Minimize off-site tracking of mud and debris and temporary access stabilization.

Construction Mitigation Measures for Water Quality

The following steps could be taken to prevent the violation of water quality standards in waterways crossed by and adjacent to the study area:

- Implement temporary and permanent Best Management Practices (BMPs) for erosion and sediment control and drainage way protection as required by local and state permitting requirements. Appropriate measures will be employed to prevent sediments from reaching the area surface waters or wetlands. These may include surface roughening, mulching, revegetation, and interim ground stabilization of roads and soil stockpiles, as well as implementation of planned drainages such as detention basins to capture sediment runoff, vehicle tracking, slope-length and runoff considerations, slope diversions and dikes, swales, sediment barriers, straw bales, and silt fences. For drainage way protection, these may include waterway crossing practices, temporary crossings, and diversions, stability practices, conveyance controls, and outlet and inlet protection measures.
- The design for the proposed highway improvements project will be developed to avoid or minimize encroachment into wetlands and floodplain areas.
- MDT will seek to mitigate unavoidable wetland impacts in the immediate vicinity of this proposed project.
- A Stormwater Pollution Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment transport will be implemented throughout the project.
- Control construction wastewater.
- The contractor will be required to have a plan for implementing appropriate measures in the event of an accidental spill.

Construction Mitigation Measures for Traffic Control

The following steps could be taken to minimize impacts to traffic circulation during construction:

- Maintain access to local businesses and residences.
- Coordinate with emergency service providers to minimize delays and ensure access to properties.
- Use signage to announce and advertise timing of road closures.
- Maintain good communication with communities and residents regarding road delays, access, and special construction activities.

Construction Mitigation Measures for Visual

Mitigation for construction-related visual impacts could include:

- Remove any unused detour pavement or signs.

3.21 Indirect Impacts

This section addresses the indirect impacts associated with the proposed improvements to US 93. Indirect impacts are those that are project-induced but occur later in time or are farther removed in distance. Indirect impacts as a result of improvements to US 93 are minimal and not all are adverse. The lack of indirect impacts is due to the nature of the improvements (primarily for safety and design not capacity). The project purpose is not to induce growth. As a result of

the proposed improvements, travel on US 93 in the study area will become safer, more efficient and more convenient for residents, interstate commuters, and tourists alike. Access to recreational resources in the area will be improved.

The primary indirect impact would be to water quality and related resources from an increase in impervious surface area. An additional 8 to 16 feet of pavement for shoulders as part of the proposed improvements result in an increase in impervious surface. An increase in impervious surfaces (pavement) results in a loss of groundwater infiltration causing water to run off these impervious surfaces, carrying pollutants directly into project drainages. An increase in impervious surface also has a cumulative impact on the areas water quality and aquatic resources. The loss of a vegetation buffer between the road and the river and wetlands would make these resources more susceptible to roadway pollutants and runoff.

The proposed project would not cause significant indirect impacts to resources in the study area. No mitigation of indirect impacts is required as a result of the project.

3.22 Cumulative Impacts

A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). The cumulative impacts analysis takes into account the past, present and future actions, regardless of responsible party along with the proposed alternative to determine the impacts to the environment as a result of all of the actions. The cumulative impacts primarily would result from growth already expected to occur in the County. As discussed in previous sections, Ravalli County was one of the fastest growing counties in Montana with a 44 percent increase in population from the 1990 census to the 2000 census with most of the growth occurring in the urban areas north of the project. This trend is expected to continue with an average growth rate of two percent per year according to the working draft (November 2002) of the *Ravalli County Growth Policy*. This increase in population has brought about a change in land use over the past 30 years from predominately agricultural, open space and forestry uses to rural residential uses and to a smaller degree commercial and industrial uses. The county is finalizing its new Growth Policy Plan that will help in guiding future development to be compatible with community goals.

Due to the rural nature of Ravalli County and that currently less than two percent of the total area of the County is zoned, there are very few reasonably foreseeable projects identified in the study area. The former and known projects in the area that have the potential to affect the Bitterroot River and its associated habitats (wetlands and riparian vegetation), wildlife safety, and aquatic resources (including bull trout) are:

- Como Bridge (completed)
- Darby-South F7-1 (36) 23—Reconstruct US 93 to 40 feet (completed)
- Sula-North and South F 7-1 (NP) 9—Reconstruction US 93 (completed)
- County Paving Program—Pave 12 miles of county road per year (on-going)

- East Fork Bitterroot River Bridge—Stevensville (completed)
- Bitterroot River-North of Hamilton (NH 7-1(98) 49F)—Reconstruct US 93 and structure (March 2004)
- Hamilton-North of Woodside (NH 7-1(86) 49F)—Reconstruct US 93 and structure (March 2005)
- Victor-North of Stevensville (NH 7-1(88) 61F)—Reconstruct US 93 and structure (March 2006)
- Main Street-Hamilton (STPS 531-1(6) 5)—Resurface (August 2005)
- Skalkaho Cr-3 kilometers SE Grantsdale (BR 9041 (30))—Bridge replacement on MTS-531 (September 2004)
- Turah-Bell Crossing (BH 0002 (511))—D1 Scour protection (2003-2004)
- D1 Scour Protection (BH 0002 (606))—2003
- Access Management for US 93 N&S NH 0002(606) (Phase 1 ready date 2005)
- Stevensville-Florence (NH 7-1(53) 59F)—G, GS, PMS
- Hamilton-Silver Bridge (NH 7-1 (52) 49F)—Bitterroot River north of Hamilton, structure and approaches (2003-2004)
- Florence East-BR-STPS 203-1(11) 10—Earliest ready date 2007

These projects each involve reconstruction or improvement of already existing facilities and are not expected to induce any substantial changes in traffic patterns. Several of the projects mentioned above will produce short term water quality impacts to waters currently supporting bull trout; however, improved hydraulic conveyance may actual improve stream conditions at each crossing.

According to the Growth Policy subdivision approvals have gone up and down over the past decade. There was a peak in 1995 with 14 major subdivisions and 100 minor subdivisions approved totaling 2,490 acres. In 2001 there were six approvals for major subdivisions and 37 for minor totaling 658 acres. Housing starts reached a peak in 1994 at 501. In 2001 the number of housing starts was 396, up 50 from 2000. The Growth Policy states, "If current trends continue, the county will experience more development, primarily residential, in a scattered pattern."

In addition to discussions with County planners, the US Army Corps of Engineers, US Forest Service (USFS) and Montana Fish Wildlife and Parks were contacted for information on the number of permits issued on the Bitterroot and other projects in the study area. Over the past decade over thirty 404 permits (nationwide, general and individual) have been issued by the Corps along US 93 between Conner and Sula. The USFS has only routine maintenance projects and several salvage sales planned in the area.

These proposed projects would cumulatively add to the impacts of the Conner N & S project (or vice versa). Such impacts would be associated with decreased roadside habitat, increased

traffic speeds, possible increased traffic volumes, and increased activities during construction. Unmitigated, the cumulative effects of projects throughout the region would incrementally reduce the opportunity for successful long-range movements of grizzly bears, gray wolves, Canada lynx, and other wildlife. Primary concerns relate to eventually impeding wildlife movement, to the point of isolating wildlife populations and eliminating vital genetic exchange.

Cumulative effects to wildlife movement, habitat, and mortality resulting from construction of the Conner N & S project will be reduced by the implementation of several mitigation measures. These include maintaining the existing alignment, general minimization of vegetation clearing throughout the project and construction of wildlife benches at bridge ends. These wildlife issues will be examined, and appropriate mitigation measures applied, relative to future projects as well. Substantial cumulative effects to threatened and endangered species movement are not expected if the previously discussed conservation measures are applied and similar measures are applied to future projects. MDT currently is involved in regional interagency planning efforts involving wildlife movement and habitat linkage issues.

With respect to bull trout, the proposed projects in the Bitterroot corridor could cumulatively add to temporary sediment increases in the respective drainages; however, such temporary water quality impacts will be reduced by implementing standard best management practices for pollutant/sediment/erosion control during construction and through compliance with project-specific conditions to be specified in MFWP Stream Protection Act and federal Section 404 Clean Water Act permits required for these projects. Substantial cumulative impacts relating to sediment generated from exposed cut slopes are not expected as long as such slopes are stabilized following construction. Substantial cumulative impacts with respect to fish mortality and fish movement through culverts are not anticipated as long as appropriate construction timing constraints and fish passage issues are considered and appropriately addressed on future projects.

Other cumulative/indirect impacts associated with the proposed action may result from increased human development in the general project area which could remove or degrade habitat and increase mortality risk to threatened and endangered species from illegal shooting, poisoning or other potentially lethal activities. It is difficult to predict whether improved transportation and access would combine with other factors that influence growth and development to convert local agricultural and timberlands to residential and commercial development (see Section 3.1.2 for additional discussion of indirect effects related to the proposed action). The above-listed proposed projects may increase pressure for growth and development. If not properly planned, growth and development may, in turn, result in loss or degradation of wetlands, wildlife and fish habitat, and other biological resources.

Over the next 20 years the increase in population and resulting development could adversely impact air and water quality, and natural and biological resources, including wildlife habitat and migration. The past, present and future developments have and would continue to convert acres of land from a natural or rural state to a developed one. Improvements to US 93 would not bring new growth into this area of the county nor contribute significantly to the degradation of area resources since the proposed improvements are not adding capacity to the roadway only making needed safety and design improvements to bring the facility up to current NHS standards.

The proposed project would not cause significant indirect or cumulative impacts to resources in the study area. No mitigation of indirect or cumulative impacts is required as a result of the project. Local planning jurisdictions can control many of the cumulative impacts through their land use and zoning plans and regulations. The County's new Growth Policy acknowledges the cumulative impacts that growth and development will have on the surrounding area and has identified ways in which to protect the natural environment. These include minimizing the loss of farm and forested land, locating development in areas near roads, other infrastructure, and existing development, and protection of air and water quality and natural resources as development occurs.

3.23 Summary of Impacts

| Resource | No-Action Alternative | Preferred Alternative |
|--------------------------------------|---|---|
| Land Use | <ul style="list-style-type: none"> No conversion of land. | <ul style="list-style-type: none"> Direct conversion of undeveloped land to highway use will occur where right-of-way or easements are acquired. Induced growth is not anticipated due to no capacity improvements. |
| Farmland | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> No impacts. |
| Social/Environmental Justice | <ul style="list-style-type: none"> No safety or travel improvements for traveling public. As traffic volumes increase, emergency service response times would continue to increase. | <ul style="list-style-type: none"> Provisions for safer, more efficient and convenient travel to schools, recreation areas, businesses and churches. No changes proposed affecting businesses or neighborhoods. Emergency response time improved. No effect on long-term population. No environmental justice impacts. |
| Right-of-Way, Relocation & Utilities | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> Estimate of approximately 63 acres of right-of-way and/or easements required. No residential or business relocations. Some utility relocation may be necessary. |

continued

Summary of Impacts (continued)

| Resource | No-Action Alternative | Preferred Alternative |
|---------------------------|---|---|
| Economic | <ul style="list-style-type: none"> Existing and future safety problems not solved which could affect future business and tourist travel. | <ul style="list-style-type: none"> Short-term economic benefit from construction spending. Improved highway would provide safer travel for residents, interstate commuters, and tourists. No effect on long-term employment. |
| Air Quality | <ul style="list-style-type: none"> Minimal long-term effects due to increase in traffic volumes. | <ul style="list-style-type: none"> Short-term effects due to construction operations. Improved traffic operations could reduce long-term air quality emissions. |
| Noise | <ul style="list-style-type: none"> Noise levels will continue to increase on adjacent properties as traffic levels increase. | <ul style="list-style-type: none"> Representative category B receptors will not receive noise levels in excess of FHWA or MDT criteria. Analysis documents a one to three decibel increase in future noise levels due to increase in future traffic. Medicine Tree cultural site would exceed FHWA criteria for Category A. |
| Water Resources & Quality | <ul style="list-style-type: none"> Continuation of fine sediments and salts entering waterway from winter roadway sanding. | <ul style="list-style-type: none"> Impacts resulting from construction and maintenance activities adversely affect water quality. Avoidance and minimization measures incorporated to maintain or provide separation between US 93 and the East Fork Bitterroot River. The bridge located at RP 18.1 will be replaced. Potential for two new bridges if oxbow meander reconnection occurs. Fill-side walls are proposed. |

continued

Summary of Impacts (continued)

| Resource | No-Action Alternative | Preferred Alternative |
|---------------------------------------|--|--|
| Water Resources & Quality (continued) | | <ul style="list-style-type: none"> The bridge design effort will investigate different approaches to developing the final structure through a process that will address environmental concerns, recreational floater activity, cost and feasibility. The process will seek a <u>practicable</u> solution, defining the term in the language of Section 404 (b)(1) guidelines (23 CFR Part 777): "...available and capable of being done after taking into consideration cost, existing technology, and logistics, in light of overall project purposes." |
| Permits Required | <ul style="list-style-type: none"> None required. | <ul style="list-style-type: none"> Permits required. |
| Wetlands | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> Approximately 6 acres estimated impacts. Avoidance and minimization measures incorporated. |
| Terrestrial Biological Resources | <ul style="list-style-type: none"> No impacts to vegetation, wildlife or species of special concern. Increases in traffic volumes can affect wildlife mortality. | <ul style="list-style-type: none"> Loss of vegetation. Exposed soils may be prone to invasion of noxious weeds. No impacts to sensitive species. Potential habitat fragmentation due to wider pavement area. Fill-side walls and cut-slope redirect wildlife movements around these difficult obstacles. Construction-related wildlife mortality. |

continued

Summary of Impacts (continued)

| Resource | No-Action Alternative | Preferred Alternative |
|-------------------------------|---|---|
| Aquatic Resources | <ul style="list-style-type: none"> No new impacts to fisheries or species of special concern. On-going road maintenance will continue to occur in close proximity to the river. | <ul style="list-style-type: none"> Avoidance and minimization measures incorporated. Impacts primarily from bridge demolition, new bridge construction, culvert replacement and fill-side wall construction. Temporary increase in erosion potential. |
| Floodplain | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> Some impacts to East Fork Bitterroot River floodplain. Minimal increase in 100-year flood surface elevation and will comply with Ravalli County Floodplain Regulations. Avoidance and minimization measures incorporated. |
| Threatened/Endangered Species | <ul style="list-style-type: none"> No impacts other than increase in future traffic volumes can affect wildlife mortality. | <ul style="list-style-type: none"> Grizzly Bear-no affect. Bald eagle, Gray wolf, Canada lynx-may affect, not likely to adversely affect. Bull trout-may affect, likely to adversely affect. Bull trout critical habitat-likely to adversely affect. Avoidance and minimization measures incorporated. |
| Cultural Resources | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> No effect to Whitesell Irrigation Ditch Flume. No effect to Joe's Bitterroot Ranch. No effect to the Medicine Tree site. Avoidance and minimization measures incorporated. No Section 4(f) impacts. |
| Hazardous Waste Sites | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> No impacts. |

continued

Summary of Impacts (continued)

| Resource | No-Action Alternative | Preferred Alternative |
|--------------------|---|--|
| Visual Resources | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> Visual impacts identified from cut slopes, loss of vegetation, fill-side walls, guardrail, and additional pavement. |
| Parks & Recreation | <ul style="list-style-type: none"> No impacts. Narrow shoulders will be perpetuated. | <ul style="list-style-type: none"> No impact to 4(f) or 6(f) or parks and recreational resources. Wider shoulders improve riding conditions for bicyclists and pedestrians. |
| Construction | <ul style="list-style-type: none"> No impacts. | <ul style="list-style-type: none"> Construction impacts to be compliant with construction management plans and regulations in place. Traffic will be maintained but some traffic delays are expected. Local access will be maintained. Stockpiles are expected. Stormwater NPDES management plan required. |

3.24 Summary of Mitigation

| Resource | Preferred Alternative |
|--------------------------------------|---|
| Land Use | <ul style="list-style-type: none"> • None required. |
| Farmland | <ul style="list-style-type: none"> • None required. |
| Social | <ul style="list-style-type: none"> • None required |
| Right-of-Way, Relocation & Utilities | <ul style="list-style-type: none"> • All right-of-way acquisition will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. • Minimize width of temporary construction permits in wetland and stream areas. |
| Economic | <ul style="list-style-type: none"> • None required. |
| Air Quality | <ul style="list-style-type: none"> • BMPs implemented to control dust. |
| Noise | <ul style="list-style-type: none"> • No mitigation required. • Privacy wall will be provided at the Medicine Tree site, which will provide privacy and some sound attenuation from highway generated noise. |
| Water Resources & Quality | <ul style="list-style-type: none"> • Application of MDT's BMPs for contractors regarding water quality and stormwater runoff will provide for minimization of impacts to water resources. • A Stormwater Pollution Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment transport will be implemented throughout the project. • Revegetation of disturbed slopes to minimize sedimentation and restore aquatic habitat. • BMPs implemented to control stormwater runoff. • Any restrictions on work near streams or in wetlands will be specified as terms of water-related permits obtained from the MDEQ, MFWP, and the Corps. • Proposal to reactivate an oxbow meander is being coordinated with landowners. |

continued

Summary of Mitigation (continued)

| Resource | Preferred Alternative |
|----------------------------------|---|
| Wetlands | <ul style="list-style-type: none"> • On-site replacement opportunities: restoration or creation. • MDT will excavate selected slopes adjacent to the East Fork Bitterroot River beyond normal cut/fill slopes on the upland fringe to create floodplain benches and potential wetland buffers where the benefit to do so is cost effective. • Camp Creek wetland site. • Potential oxbow meander reconnection would allow wetland creation/restoration. |
| Terrestrial Biological Resources | <ul style="list-style-type: none"> • Revegetate disturbed areas as soon as practicable following disturbance. • Survey for sensitive species prior to construction. • With the exception of temporary clearing that may be required for culvert placement and relocation of utilities, clearing and grubbing will be confined to the construction limits (i.e., within the cut/fill limits). Clearing beyond defined construction limits will be kept to the minimum necessary for the completion of the project. Any temporary clearing necessary for culvert placement outside the construction limits or temporary facilities will be kept to the smallest area possible and reclaimed with desirable vegetation as soon as practicable. • Power wash equipment to avoid/minimize spreading weeds and whirling disease. • Prepare weed management plan. • MDT will investigate the opportunity to incorporate benches underneath the bridge ends that would allow for terrestrial wildlife to pass underneath the structures throughout the year except perhaps during extremely high runoff events. • Implement wildlife culvert crossings at specific locations. • To provide a source of water to keep animals from crossing the road Montana Fish, Wildlife and Parks suggests construction of an artificial watering hole north of the Medicine Tree on the east side of the highway to minimize animal movement across the highway. MDT will do a geotechnical/hydrological investigation to determine the feasibility of the watering hole and has initiated coordination for a cooperative maintenance arrangement with local interest groups. |

continued

Summary of Mitigation (continued)

| Resource | Preferred Alternative |
|-------------------|---|
| Aquatic Resources | <ul style="list-style-type: none"> • A Stormwater Pollution Prevention Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment transport will be implemented throughout the project. • Development of a revegetation plan, erosion control plan, and stormwater pollution prevention plans will be coordinated with appropriate permitting and resources agencies. • Any restrictions on work near streams or in wetlands will be specified as terms of water-related permits obtained from the MDEQ, MFWP, and the Corps. <p>The MDT standard specifications require that the contractor must, unless specifically permitted to do otherwise:</p> <ul style="list-style-type: none"> • Not spill or dump material from equipment into streams or associated wetlands. • Not permit wash water from cleaning concrete related equipment or wet concrete to enter streams, riparian areas, or wetlands. • Not place fill or embankment material into streams, streambeds, riparian areas, or wetlands. • Store and handle petroleum products, chemical, cement, and other deleterious materials in a manner that prevents their entry into streams and associated wetlands. • Provide sediment controls for drainage from topsoil stockpiles, staging areas, access roads, channel changes, and instream excavations. • Reclaim streambeds and streambanks as closely as possible to their pre-construction condition. • Any equipment that would ultimately come in contact with the water should be steam-cleaned prior to and after completion of the project to help prevent the spread of whirling disease to other potential waters. |
| Floodplain | <ul style="list-style-type: none"> • Revegetate disturbed floodplain areas. • Coordinate with Ravalli County Floodplain Administrator. |

continued

Summary of Mitigation (continued)

| Resource | Preferred Alternative |
|-------------------------------|--|
| Threatened/Endangered Species | <p>Bald Eagle</p> <ul style="list-style-type: none"> • Confirm bald eagle nest status prior to construction. • Survey construction-related activity areas for potential threatened and endangered and sensitive specie habitat/occurrence. • Raptor-proof any relocated overhead utility lines. <p>Bull Trout</p> <ul style="list-style-type: none"> • With respect to the clear zone, no clearing of woody vegetation will occur within the riparian zone along study area streams beyond the area absolutely necessary for safety or construction of the new roadway. • Any restrictions on work near streams or in wetlands will be specified as terms of water-related permits obtained from the MDEQ, MFWP, and the Corps. • Removed culverts, guardrail, and other will not be stockpiled in or adjacent to wetland or stream areas. • To minimize sedimentation as well as construction hardship, it is recommended that, if possible, construction in and adjacent to wetlands and streams be timed for these sites to be as “dry” as possible during construction. • Construction equipment operating in wetlands will be limited to that which is needed to perform the necessary work. • Width of temporary construction easements will be minimized to the extent possible in wetland and stream areas. • Disturbed wetland and streamside areas will be revegetated with desirable material as soon as practicable. <p>Gray Wolf and Canada Lynx</p> <ul style="list-style-type: none"> • With the exception of temporary clearing that may be required for culvert placement and relocation of utilities, clearing and grubbing will be confined to the construction limits (i.e., within the cut/fill limits). Clearing beyond defined construction limits will be kept to the minimum necessary for the completion of the project. Any temporary clearing necessary for culvert placement outside the construction limits or temporary facilities will be kept to the smallest area possible and reclaimed with desirable vegetation as soon as practicable. |

continued

Summary of Mitigation (continued)

| Resource | Preferred Alternative |
|-----------------------|---|
| Cultural Resources | <ul style="list-style-type: none"> • If unrecorded cultural material is encountered during construction, the construction activity will cease and the MDT archaeologist will assess the find. • Terms and conditions of the draft MOA between MDT and the CSKT will be adhered to during construction. |
| Hazardous Waste Sites | <ul style="list-style-type: none"> • Hazardous materials, including fuel and lubricating oils will not be stored and construction equipment will not be fueled within 50 feet from the highest anticipated water level (MDT Standard Specification 208.03.04) or as identified as part of permit conditions, whichever is more restrictive. |
| Visual Resources | <ul style="list-style-type: none"> • None required. |
| Parks & Recreation | <ul style="list-style-type: none"> • None required. |
| Construction | <p>The following steps will be taken to prevent the violation of water quality standards in waterways crossed by and adjacent to the study area:</p> <ul style="list-style-type: none"> • Implement temporary and permanent Best Management Practices (BMPs) for erosion and sediment control and drainage way protection as required by local and state permitting requirements. Appropriate measures will be employed to prevent sediments from reaching the area surface waters or wetlands. These may include surface roughening, mulching, revegetation, and interim ground stabilization of roads and soil stockpiles, as well as implementation of planned drainages such as detention basins to capture sediment sand-runoff, vehicle tracking, slope-length and runoff considerations, slope diversions and dikes, swales, sediment barriers, straw bales, and silt fences. For drainage way protection, these may include waterway crossing practices, temporary crossings, and diversions, stability practices, conveyance controls, and outlet and inlet protection measures. • The design for the proposed highway improvements project will be developed to avoid or minimize encroachment into wetlands and floodplain areas. • MDT will seek to mitigate unavoidable wetland impacts in the immediate vicinity of this proposed project. • A Stormwater Pollution Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment transport will be implemented throughout the project. |

continued

Summary of Mitigation (continued)

| Resource | Preferred Alternative |
|------------------------|--|
| Construction (cont'd.) | <ul style="list-style-type: none">• Control construction wastewater.• The contractor will be required to have a plan for implementing appropriate measures in the event of an accidental spill.• Suppress dust through watering or dust palliative.• Maintain access to local businesses and residences.• Coordinate with emergency service providers to minimize delays and ensure access to properties.• Use signage to announce and advertise timing of road closures.• Remove any unused detour pavement or signs. |

4.0 CONSULTATION, COORDINATION, AND ISSUES

This chapter identifies agencies participating in preparation of the EA. This chapter discusses agency scoping and public involvement, which guided development of issues and alternatives. It identifies agencies, and individuals. Appendix A includes project correspondence.

4.1 Agencies with Jurisdiction and/or Permits Required

Letters concerning specific environmental issues were received and are included in Appendix A.

The Conner North and South project has included coordination with regional, state, and federal agencies.

- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Federal Emergency Management Agency
- U.S. Environmental Protection Agency
- U.S. Department of Agriculture, Natural Resource Conservation Service
- U.S. Forest Service
- Montana Fish, Wildlife and Parks
- Montana Department of Environmental Quality
- State Historic Preservation Officer
- Ravalli County
- Confederated Salish and Kootenai Tribe

No formal cooperating agency agreements were made for this project.

MDT held a meeting on October 24, 2002 with representatives of the federal and state agencies that have jurisdiction or require permits to discuss the preliminary project design and potential avoidance and minimization measures related to impacts to the East Fork Bitterroot river and associated floodplain and riparian vegetation. Other issues discussed were related to water quality and the ESA-protected bull trout. Input received and decisions made at the meeting will allow more of these issues to be incorporated during the NEPA phase of the project and provide for a better-coordinated permitting process.

4.2 Others Agencies, Groups, or Persons Contacted or Contributing Information

The Conner North and South project has included coordination with the following agencies and interested parties.

- Montana Natural Heritage Program
- Montana Rivers Information System (now referred to as MFISH)
- Bitterroot Valley Chamber of Commerce Office
- Ravalli County Commissioners

- Rocky Knob Lodge owner
- Bitterroot Wildlife Focus
- Project landowners

4.3 Coordination and Public Involvement

Previous coordination on the project occurred in relation to the Environmental Assessment (EA) prepared for the project in December of 1995. Two previous meetings were held during this initial EA preparation. The first was an information meeting and was held in November of 1989. The second meeting was a public hearing held for the EA in January of 1996. Other meetings with agencies and the Confederated Salish and Kootenai Tribes were held during the development of alternatives. This input was used in identification of the Preferred Alternative. Tribal coordination was key to creation and identification of Alternative E as the Preferred Alternative in the 1995 Environmental Assessment.

Since the delay in the project and identification of Alignment D as the Preferred Alternative due to lack of public support for Alternative E, an extensive amount of public and agency coordination has occurred throughout all phases of the planning and design process for the US 93 improvements. Public coordination has involved meeting with citizens, property owners, businesses, and local officials. These meeting involved telecommunications, written communications, meetings with small groups, and public meetings.

Agency coordination has been ongoing since the beginning of the project. Staff meetings have been held with the planning and engineering departments of the jurisdictions along the US 93 corridor. Field meetings have also been held with resource agencies to determine the best design features that reduce impacts to biological resources.

Mailing List. The project team maintains a Conner North and South project mailing list. The mailing list has been developed as people have signed in at the public meetings, written letters, and contacted the project staff.

Newsletters.

- Newsletter #1, created and mailed in November 2000, provided an introduction to the project including a project map, an outline of the public involvement and environmental processes, issues to be addressed in the environmental assessment, project contacts, and notification of the first public scoping meeting.
- Newsletter #2, mailed in January 2003, provided a project update of design issues and proposed schedule.

Public Meetings. One public open-house meeting was held to provide information to the public and get feedback on the project. This meeting was held on December 7, 2000 from 5:30 to 8:00 p.m. Forty-one people attended the meeting. Topics included on display were: project introduction, build alternative, roadway needs, environmental considerations, Medicine Tree issues, and comments received to date.

Landowner Coordination. Information related to the proposal to reconnect a river meander was sent to potentially affected landowners and also discussed at a meeting held on February 27, 2003. A transcript was made of the meeting's presentation and discussion. It is included in Appendix B. A copy of the transcript was mailed to all potentially affected landowners.

NEPA/MEPA Coordination. This EA evaluates environmental effects of the proposed action in compliance with the National Environmental Policy Act (NEPA) and Montana Environmental Policy Act (MEPA). In accordance with state and federal regulations for public involvement (ARM 18.2.240 and 23 CFR 771.111, respectively), this EA will be available for review by the public and responsible agencies. A Notice of Availability of the EA and the planned date for the Public Hearing will be announced in local papers at least 14 days in advance of the hearing. This announcement will also be mailed to people on the project mailing list.

At the Public Hearing, the general public will be given the opportunity to provide official comment on the project. Oral and written comments, to be included as an official part of the record, will be accepted for 30 days following the Notice of Availability. MDT will review all written and oral comments received at the hearing or written comments received during the review period. MDT will prepare responses to all substantive comments. If no significant impacts are found, MDT will prepare a decision document Finding of No Significant Impact (FONSI). If significant impacts are identified, MDT and FHWA will consider preparing an environmental impact statement (EIS).

4.3.1 CONSULTATION WITH THE CONFEDERATED SALISH AND KOOTENAI TRIBES

A draft memorandum of agreement (MOA) was developed by the MDT, FHWA and Confederated Salish and Kootenai Tribes (CSKT) to address issues related to the proposed action, specifically related to the Medicine Tree cultural site.

4.3.2 PUBLIC INVOLVEMENT AND ISSUES

The following list represents comments received at the public information meeting held on December 7, 2000.

1. Road is unsafe with no shoulders and guardrail, especially in steep sections.
2. No places to go if an accident or mechanical problems occurs.
3. The Conner cut-off approach is difficult to see from both the south and north and at night or in the daylight.
4. The Dixon Creek Bridge has a safety issue with ingress and egress. May need turn lane added.
5. Will there be any new public fishing access sites developed?
6. How wide will the shoulders be and where will guardrails be located?
7. A 4-lane road should be built all the way so that it won't need to be done in the future.
8. The Medicine Tree Bridge is unsafe. Are there plans to replace it?

9. How much right-of-way will be taken and where? What is the process?
10. On the curve between 440 and 450, there have been several accidents with people going in the river. MDT might consider straightening that area out and adding a retaining wall for safety and site distance.
11. How many passing lanes will there be? Will they be three lanes or four lanes? Three lanes are preferred.
12. When a road is designed, how far into the future is it designed for and what is the expected capacity?
13. Does the project go as far south as the big horn sheep herd? Possible impacts may occur with increased traffic.
14. As speed increases on the road, what will happen to wildlife? Measures should be taken to reduce wildlife kills such as signage in specific crossing areas.
15. If a shoulder is added, will this be encouragement for people to stop and take pictures of wildlife?
16. Where are the bike lanes located and how far do they go?
17. No bicycles should be allowed on roadway.
18. How many bicyclists use the road? Need an extra four to five feet just for bicycle lane.
19. Can we designate this as a scenic highway?
20. What is done with the easement areas? Are they reseeded?
21. What will happen with utilities within the study area?
22. Can the integrity of the river be maintained?
23. What are the impacts to the river and how much will be Gabion wall?
24. How do you define a wetland?
25. In the consideration of the highway construction, which has stronger precedence—moving away from a wetland toward the river or vice-versa?
26. When would condemnation take place?
27. What is the project schedule beginning to end?
28. What are construction impacts to business access?
29. Is the Lewis & Clark celebration going to cause traffic problems during construction?
30. Will there be noise impacts from trees being cut down in front of homes?
31. How close can a residence be to a highway?
32. What are the growth forecasts for the project and how will that impact traffic?
33. Is the federal government obligated to upgrade the highway?
34. There have been many hardships in the area due to the fires and this will only cause additional hardships by inviting more traffic.

35. Can some of the funds go towards public transportation such as a bus route during ski season?

Appendix A: Agency Coordination Letters



United States
Department of
Agriculture

May 6, 2002

Natural
Resources
Conservation
Service

3550 Mullan Road
Suite 106
Missoula, MT
59808-5125

Wendy Wallach
Carter-Burgess
216 16th St. Mall
Suite 1700
Denver, CO 80202-5131

Re: Conner North & South Farmland Conversion

Dear Ms. Wallach,

Your letter dated April 30, 2002 stated "There is only one parcel containing prime farmland (Ab) adjacent to the corridor. There will not be any direct impacts to this parcel as we will be widening in the opposite direction." Based on this statement, and information I received from our May 6 phone conversation, it is not necessary to complete a Farmland Conversion Impact Rating (form AD-1006). Re-construction projects that stay within the pre-existing highway right-of-way are not converting farm land; that land within the right-of-way is not considered farmland as it is already converted. Widening of the right-of-way for a re-construction project or a new road construction could convert farmland and would require the completion of Form AD-1006.

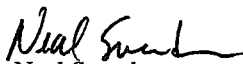
Please provide more detailed information in future Farmland Conversion Impact Rating requests. In order to complete Part IV of the form I need the acres of each soil type affected by the project. A smaller scale map showing the exact width of the conversion would allow me to calculate these acres. A map prepared by you showing the detailed soils and impact areas would be most helpful.

I am returning the Form AD-1006 with my changes shown in red. Also included is a copy of some tips in completing the form.

Please call me at 406 829-3395, ext 3 if you have further questions.

The following web site has a directory of Montana NRCS offices:
<http://mt.nrcs.usda.gov/pas/directry/organiz.html>

This site has more information on the Farmland Protection Policy Act:
<http://www.nrcs.usda.gov/programs/fppa/index.html>


Neal Svendsen
Resource Soil Scientist

my email is nsvendsen@mt.usda.gov

Enclosures

cc: Lane Johnson, District Conservationist, Hamilton, MT

FARMLAND CONVERSION IMPACT RATING

| | | | |
|--|--|--|--|
| PART I (To be completed by Federal Agency) | | Date of Land Evaluation Request: 11/28/01 4/30/02 | |
| Name of Project: Conner North & South | | Federal Agency Involved: USDOT-Federal Highway Administration | |
| Proposed Land Use: Highway Right-of-Way | | County: Ravalli | |
| PART II (To be completed by SCS) | | Date Request Received by SCS: 12/3/01 5/2/02 | |
| Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply - do not complete additional parts of this farm.) | | <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Acres Irrigated 76,870 Average Farm Size 170 ac |
| Major Crop(s): AIF and grass for hay and pasture, cattle beef | Farmable Land in Govt. Jurisdiction Acres: 125,350 | 35% | Amount of Farmland as Defined in FPPA Acres: 46,385 13% |
| Name of Land Evaluation System Used: Bitterroot Valley Area Montana Soil Survey | Name of Local Site Assessment System: None available | Date Land Evaluation Returned by SCS: 5/6/02 | |
| PART III (To be completed by Federal Agency) | | Alternate Site Rating | |
| | | Site A | Site B |
| | | Site C | Site D |
| A. Total Acres to be converted directly | | 18.6 | |
| B. Total Acres to be converted indirectly | | 0 | |
| C. Total Acres in Site | | 72.14 | |
| PART IV (To be completed by SCS) Land Evaluation Information | | | |
| A. Total Acres Prime and Unique Farmland | | | |
| B. Total Acres Statewide and Local Important Farmland | | | |
| C. Percentage of Farmland in County or Local Govt., unit to be converted | | 0 | |
| D. Percentage of farmland in Govt. Jurisdiction with same or higher relative value. | | | |
| PART V (To be completed by SCS) Land Evaluation Criterion Relative Value of Farmland to be converted (Scale of 0 to 100 Points) | | | |
| PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.8(b)) | | Max. Pts. | |
| 1. Area Nonurban Use | 15 | 11 | |
| 2. Perimeter in Nonurban Use | 10 | 7 | |
| 3. Percent of Site Being Farmed | 20 | 3 | |
| 4. Protection Provided by State and Local Govt. | 20 | 4 | |
| 5. Distance from Urban Builtup Area | N/A | | |
| 6. Distance to Urban Support Services | N/A | | |
| 7. Size of present farm unit compared to average | 10 | 4 | |
| 8. Creation of nonfarmable farmland | 25 | 3 | |
| 9. Availability of farm support services | 5 | 5 | |
| 10. On-farm investments | 20 | 10 | |
| 11. Effects of conversion on farm support services | 25 | 0 | |
| 12. Compatibility with existing agricultural use | 10 | 0 | |
| TOTAL SITE ASSESSMENT POINTS | | 160 | 47 |
| PART VII (To be completed by Federal Agency) | | | |
| Relative value of farmland (From Part V) | | 100 | |
| Total Site Assessment (From Part VI above or a local site assessment) | | 160 | 47 |
| TOTAL POINTS (Total of above 2 lines) | | 260 | |
| Site Selected: Site A | Date of Selection: | Was a Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Reason for Selection: | | | |

(See instructions on reverse side)

Form AD-1006(10-83)



United States Department of the Interior

FISH AND WILDLIFE SERVICE

MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

M.17 FHWA Conner N&S (Hwy.93)

March 1, 2002

Diana Bell
Carter & Burgess, Inc.
216 Sixteenth Street Mall
Suite 1700
Denver, Colorado 80202-5131

Dear Ms. Bell:

This is in response to your November 28, 2001 letter pertaining to a proposal by the Montana Department of Transportation (Department) to improve 15.5 kilometers of US Highway 93 north and south of Conner, Montana in Ravalli County. Your letter indicated that the proposed transportation improvements could involve reconstruction, realignment, resurfacing, widening, and bridge reconstruction along the highway corridor. The Department is preparing an Environmental Assessment (EA) for this proposal and your letter requested a formal scoping letter from the US Fish and Wildlife Service (Service) describing any environmental resources or issues we feel need to be addressed in this EA. The Service's Montana Field Office received your letter on December 3, 2001. These comments have been prepared under the authority of, and in accordance with, the provisions of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

The Service has participated in several meetings and field reviews of this proposed project corridor during the past year. Resource concerns the Service would have for this project would likely be similar to those we had with the Department's adjacent Sula North & South project currently under construction along US Highway 93 immediately south of this proposed project. Both of these projects occur along the East Fork of the Bitterroot River in a narrow valley that confines the highway to close proximity with the river in numerous locations. When this section of highway was originally constructed during the 1930's, the overall length of the East Fork was shortened by approximately 1.6 kilometers because a dozen meander bends were removed in order to reduce the number of bridges needing to be constructed. In addition, channel width and floodplain width were constricted in numerous areas as a result of road and bridge construction. During the ensuing 65 years, the East Fork of the Bitterroot River has been adjusting to the increased water velocities and bank erosion caused by those activities, often necessitating bank stabilization measures to protect and maintain the present alignment of the highway and other developments along its banks. Fish species utilizing the river, including the threatened bull trout (*Salvelinus confluentus*), have suffered from reduced habitat quality and quantity throughout this stretch of river during this period.

Given the current situation of the East Fork of the Bitterroot River along US Highway 93 and the Department's proposal to improve the highway north and south of Conner, the Service recommends the following resources and issues be addressed in the EA that is being prepared.

- Impacts to Federally-listed threatened, endangered, proposed, and candidate species that may occur in the project corridor should be fully addressed, including direct, indirect, and cumulative effects. These species may include bull trout, bald eagle (*Haliaeetus leucocephalus*), Canada lynx (*Lynx canadensis*), gray wolf (*Canis lupus*), and yellow-billed cuckoo (*Coccyzus americanus*). The Service is particularly interested in a comprehensive assessment of impacts to the aquatic system from potential construction features such as gabion walls/baskets, riprap, or other types of bank revetment, and bridges.
- The Service would like the proposed project design to include features such as clear span bridges over any tributary streams that need to be crossed, and bridge crossings of the river that minimize the number of instream piers. Any instream piers that are necessary should be located outside of the river's thalweg. The Service recommends the EA include consideration of these types of design features that could be incorporated to minimize aquatic impacts. If features like these are not included in the proposed design, the EA should present a discussion of why they were excluded.
- Because the construction and presence of US Highway 93 has had a major effect on the ability of the East Fork of the Bitterroot River to fully function as high-quality trout habitat, the Service recommends the EA discuss options available for increasing fisheries habitat quality and quantity in the vicinity of this proposed project. A viable option to very strongly be considered should include the reconnecting of one or more of the meander bends that were cut off from the river during the original construction of the highway.
- Design features that constrict floodplains or encroach into stream channels should be evaluated relative to their effects on the proper functioning of the stream system. Upstream and downstream effects of such features should be assessed.
- The EA should address impacts to wetlands that may occur because of project related activities. A discussion of wetland avoidance and minimization techniques would be useful.
- Consideration should be given during project planning to facilitating the movement of terrestrial wildlife across the highway corridor. The EA should present a discussion of techniques that may be appropriate to include in the context of this project and the consideration they were given during the planning process.

Thank you for the opportunity to provide comments on this proposed project. As this project progresses, the Service would appreciate being included in the formulation and discussion of

alternatives. If you have questions regarding this letter, or need additional information, please contact Mr. Scott Jackson, of my staff, at (406)449-5225, ext. 201.

Sincerely,

A handwritten signature in cursive script that reads "R. Mark Wilson". The signature is written in black ink and is positioned above the printed name and title.

R. Mark Wilson
Field Supervisor

Copies to: Gordon Stockstad, MDT, Helena, MT
Dale Paulson, FHWA, Helena, MT
Todd Tillinger, COE, Helena, MT
Glenn Phillips, MDFWP, Helena, MT



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

3550 Mullan Road
Suite 106
Missoula, MT
59808-5125

January 2, 2002

Diana Bell
Carter-Burgess
216 16th St. Mall
Suite 1700
Denver, CO 80202-5131

Re: Conner North & South Farmland Conversion

Dear Ms. Bell

Prime Farmland

Enclosed are copies of the soil survey maps, soil legend, and soil reports for the Conner North & South highway project. There are Prime Farmland and Farmland of Statewide Importance soil map units in the project area. These map units are highlighted in yellow on the soil legend and soil maps. There are no soil map units in Ravalli County currently designated as Unique Farmland or Farmland of Local Importance.

Also enclosed is a Farmland Conversion Impact Rating form with Part II completed. I am not able to complete Part IV since I don't know the acreage involved in the highway project.

Environmental Issues

There are jurisdictional wetlands in the project area that will need protection/mitigation for highway re-construction.

The culvert under Highway 93 for Medicine Tree Creek at the confluence with the East Fork Bitterroot River, near the E1/4 corner of section 21, T2N, R20W, is elevated several feet above the East Fork. Designs for highway re-construction should include measures to connect Medicine Tree Creek to the East Fork for fish passage.

Neal Svendsen
Resource Soil Scientist

Enclosures

cc: Lane Johnson, District Conservationist, Hamilton, MT

406 676 2848

SOIL MAP LEGEND
Conner North & South, MDOT Project F-7-1(41)16F

| Map symbol | Soil name |
|------------|--|
| Ab | ADEL LOAM, GENTLY SLOPING - <i>prime, if irrigated</i> |
| Af | ALLUVIAL LOAMY LAND - <i>statewide importance</i> |
| Ag | ALLUVIAL LAND AND VALLEY SLOPES |
| B2o | BREECE SANDY LOAM, SLOPING |
| B2x | BROWNLEE-STECUM ASSOCIATION, MOUNTAINOUS |
| C2d | CLARK FORK COBBLY SANDY LOAM, GENTLY SLOPING |
| Ca | CHAMOKANE COMPLEX |
| Cb | CHAMOKANE FINE SANDY LOAM |
| Cc | CHAMOKANE GRAVELLY LOAMY SAND, SHALLOW |
| Ce | CHAMOKANE LOAMY SAND-SANDY LOAM, SHALLOW |
| L2k | LONE ROCK COBBLY COARSE SANDY LOAM, LEVEL |
| L2l | LONE ROCK FINE SANDY LOAM, DARK COLORED VARIANT, LEVEL |
| Rx | RIVERSIDE SOILS, MODERATELY STEEP AND STEEP |
| S2g | SLOCUM LOAM - <i>prime, if irrigated</i> |
| S2l | SLOCUM LOAM, POORLY DRAINED VARIANT |
| S2m | SLOCUM SANDY LOAM-GRAVELLY SANDY LOAM, SHALLOW |
| S2n | SLOCUM-SHALLOW MUCK COMPLEX |

Ravalli Co. Aueage

Total Private 355,774

Total Cropland 82,562 }
Total Irrigated 76,873 } 1997 Census of Ag

Ave Farm size 170

Total Farmable 125,350

Total Prime & statewide 46,385 } Bitterroot Valley Area Soil Survey

PRIME FARMLAND
BITTERROOT VALLEY AREA, MONTANA: Detailed Soil Map Legend

| Map symbol | Soil name |
|------------|--|
| Aa | ADEL LOAM, NEARLY LEVEL (Prime farmland if irrigated) |
| Ab | ADEL LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| Ac | ADEL LOAM, SLOPING (Farmland of statewide importance) |
| Af | ALLUVIAL LOAMY LAND (Farmland of statewide importance) |
| Ah | AMSTERDAM SILT LOAM, LEVEL (Prime farmland if irrigated) |
| Ak | AMSTERDAM SILT LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| Al | AMSTERDAM SILT LOAM, SLOPING (Farmland of statewide importance) |
| B3b | BURNT FORK GRAVELLY LOAM, LEVEL (Prime farmland if irrigated) |
| B3c | BURNT FORK GRAVELLY LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| B3d | BURNT FORK GRAVELLY LOAM, SLOPING (Prime farmland if irrigated) |
| B3e | BURNT FORK GRAVELLY LOAM, STRONGLY SLOPING (Farmland of statewide importance) |
| B3f | BURNT FORK LOAM, LEVEL (Prime farmland if irrigated) |
| B3g | BURNT FORK LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| B3h | BURNT FORK LOAM, SLOPING (Farmland of statewide importance) |
| Bn | BITTERROOT SILT LOAM, LEVEL (Prime farmland if irrigated) |
| Bo | BITTERROOT SILT LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| C3h | COONEY LOAM, SLOPING (Farmland of statewide importance) |
| C3p | CORVALLIS SILT LOAM (Prime farmland if irrigated) |
| Cf | CHARLOS LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| Ck | CHARLOS SILT LOAM, LEVEL (Prime farmland if irrigated) |
| Cl | CHARLOS SILT LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| G2f | GORUS SILT LOAM, GENTLY SLOPING |
| G2n | GRANTSDALE LOAM, LEVEL (Prime farmland if irrigated) |
| G2o | GRANTSDALE LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| G2w | GREELEY SANDY LOAM, LEVEL (Prime farmland if irrigated) |
| G2x | GREELEY SANDY LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| G2y | GREELEY SANDY LOAM, SLOPING (Prime farmland if irrigated) |
| Ga | GALLATIN LOAM, DRAINED, LEVEL (Prime farmland if irrigated) |
| Gb | GALLATIN LOAM, DRAINED, GENTLY SLOPING (Prime farmland if irrigated) |
| Gd | GALLATIN SILT LOAM, LEVEL (Prime farmland if irrigated) |
| Ge | GALLATIN SILT LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| Gf | GALLATIN SILTY CLAY LOAM, LEVEL (Prime farmland if irrigated) |
| Go | GIRD SILT LOAM, SLOPING (Farmland of statewide importance) |
| Gt | GIRD SILT LOAM, HIGH LIME SUBSOIL VARIANT, GENTLY SLOPING (Farmland of statewide importance) |
| Gu | GIRD SILT LOAM, HIGH LIME SUBSOIL VARIANT, SLOPING (Farmland of statewide importance) |
| Ha | HAMILTON FINE SANDY LOAM, LEVEL (Prime farmland if irrigated) |
| Hb | HAMILTON FINE SANDY LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| Hc | HAMILTON SILT LOAM, LEVEL (Prime farmland if irrigated) |
| Hd | HAMILTON SILT LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| He | HAMILTON-CORVALLIS SANDY LOAMS, LEVEL (Prime farmland if irrigated) |
| Hf | HAMILTON-CORVALLIS SILT LOAMS, LEVEL (Prime farmland if irrigated) |
| Ka | KENSPUR FINE SANDY LOAM (Prime farmland if irrigated) |
| L2g | LOLO GRAVELLY LOAM, LEVEL (Prime farmland if irrigated) |
| L2h | LOLO GRAVELLY LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| Ld | LARRY CLAY LOAM, DRAINED, LEVEL (Prime farmland if irrigated) |
| Le | LARRY CLAY LOAM, DRAINED, GENTLY SLOPING (Prime farmland if irrigated) |
| Lk | LARRY SILT LOAM, DRAINED, LEVEL (Prime farmland if irrigated) |
| Lm | LARRY SILT LOAM, DRAINED, GENTLY SLOPING (Prime farmland if irrigated) |
| Lo | LICK GRAVELLY LOAM, GENTLY SLOPING |
| Lp | LICK GRAVELLY LOAM, SLOPING |
| Lr | LICK GRAVELLY LOAM, STRONGLY SLOPING (Farmland of statewide importance) |
| Lu | LICK LOAM, GENTLY SLOPING |
| Ma | MAIDEN-GIRD SILT LOAMS, GENTLY SLOPING (Prime farmland if irrigated) |
| Mb | MAIDEN-GIRD SILT LOAMS, SLOPING (Farmland of statewide importance) |
| S2g | SLOCUM LOAM (Prime farmland if irrigated) |
| S2h | SLOCUM LOAM, DEEP (Prime farmland if irrigated) |
| S3a | SULA SILT LOAM, LEVEL (Prime farmland if irrigated) |
| S3b | SULA SILT LOAM, GENTLY SLOPING (Prime farmland if irrigated) |
| S3c | SULA SILT LOAM, SLOPING (Farmland of statewide importance) |
| Sk | SKAGGS SILT LOAM, SLOPING (Farmland of statewide importance) |
| We | WILLOUGHBY LOAM, LEVEL (Farmland of statewide importance) |
| Wf | WILLOUGHBY LOAM, GENTLY SLOPING (Farmland of statewide importance) |

**Montana Department of Transportation**

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

February 26, 2003

Stan Wilmoth
State Historic Preservation Office
1410 east 8th Avenue
P.O. Box 201202
Helena, MT 59620

Subject: **Connor North & South**
F 7-1(41) 16
Control Number 1281

Dear Stan,

This letter constitutes a determination of effect for the above Montana Department of Transportation (MDT) project. This project has a Section 106 compliance history going back to 1988. I am not going to rehash it all here. Suffice it to say that over the course of the last five or six years MDT and the Confederated Salish and Kootenai Tribes (CSKT) have negotiated a new alignment for the Connor North and South project on Highway 93 in the vicinity of the Bitterroot Medicine Tree, **24RA513**.

There are two properties upon which a new effect determination needs to be made. The properties are the Medicine Tree, **24RA513**, and Joe's Bitterroot Ranch (AKA The Rocky Knob Restaurant and Bar), **24RA665**. Both properties have been determined eligible for the National Register of Historic Places. Plan sheets showing the alignment of Highway 93 adjacent to both sites are attached.

The Medicine Tree is eligible for the National Register of Historic Places (NRHP) under Criterion A. The new alignment of Highway 93 moves the highway centerline approximately five feet (1.5 meters) south of its current location, *away* from the Medicine Tree. Although the Tree died several years ago and its top was broken off in a violent windstorm about a year later, MDT and the CSKT have decided to continue with plans to erect a low, privacy barrier between what remains of the Medicine Tree and the edge of the Highway 93 pavement. Materials pertaining to the privacy wall and its proximity to the Tree are attached.

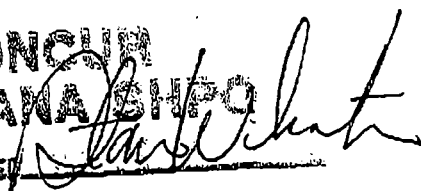
Wilmoth
2/26/03
Page 2

MDT concurs with the CSKT Preservation Department that the Connor North & South Project will have *no effect* to the values identified in the Keeper of the National Register's determination of eligibility for 24RA513, the Bitterroot Medicine Tree.

Joe's Bitterroot Ranch, AKA the Rocky Knob Restaurant and Bar, is eligible for the NRHP under Criteria A and C. The Highway 93 alignment will move north approximately five feet (1.5 meters), moving it away from 24RA665. The Connor North & South Project will have no effect upon this NRHP eligible property either.

If you have questions about this matter please contact me at 406-444-0455 or splatt@state.mt.us.



CONCUR
MONTANA SHPO
3/13/03
SIGNED: 

Steve Platt, Archaeologist
Environmental Services

Cc: Gordon Stockstad, Resources and Permitting
Marcia Pablo, CSKT Preservation Department
Diana Bell, Carter Burgess

w/ attach.
w/ attach.
w/ attach.

RECEIVED

JAN 8 1993

State Historic Preservation Office

Montana Historical Society

Mailing Address: 225 North Roberts • Helena, MT 59620-1201

Office Address: 102 Broadway • Helena, MT • (406) 444-7715

MASTER
FILE
COPY

January 6, 1993

Edrie Vinson, Supervisor
Environmental Unit
Montana Department of Transportation
2701 Prospect
Helena, MT 59620

Re: Conner - North & South


Dear Edrie:

Kathy, Pat, Chere, and I all took another look at 24RA295, the Medicine Tree Ranch. We looked at both the original inventory and Janene's October 31, 1990 letter to you that details changes to the primary house. We continue to find that, while the building is attractive, it is so substantially remodeled as to no longer meet the National Register of Historic Places's criteria regarding integrity. This judgment seemed to be pretty straightforward to the group of us assembled.

We continue to anticipate additional information from you on the buried prehistoric site in this project, 24RA277. From my own more careful review of the original inventory report and from talking with staff here, resolving eligibility for this site without site testing and better site definition will be, at best, a challenge. So, the sooner we look at additional information and reasoning the better.

Thanks!

Sincerely,



Marcella Sherfy
State Historic Preservation Officer

File: Comp, MDOT, Conner N & S



Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201202
Helena, MT 59620-1202

JUN 8 1993

Mark Radabaugh, Governor

June 4, 1993

JUN 17 1993

ENVIRONMENTAL BUREAU

Marcella Sherfy
State Historic Preservation Officer
Montana Historical Society
102 Broadway
P.O. Box 201202
Helena, MT 59620

Subject: Connor North and South
F 7-1(41)16
Control Number 1281

In March 1993, Montana Department of Transportation cultural resource personnel, Jon Axline and Steve Platt, visited the above referenced project area to conduct follow up research. At that time they discovered that two sites had been destroyed by recent logging on private land.

This letter is written in response to a letter from Kathy Huppe to MDT dated 4/20/93. In that letter, Kathy suggested that before making an eligibility determination for 24RA283, as much information as possible should be recovered from the remains of the trees.

On 5/26/93, Steve Platt borrowed an increment borer from Bitterroot National Forest and cored Tree #1 at 24RA283. Unfortunately, Platt could not use the increment borer designed for aging large diameter trees because the two year old dead wood in the stumps had hardened considerably since the death of the tree and threatened to break an expensive piece of borrowed equipment. Nonetheless, with a smaller increment borer Platt was able to core and date the scar on Tree #1 at the site. The scar on Tree #1 is approximately 100 years old, plus or minus ten years.

Platt was able to get a reasonable estimate of the trees' ages by counting the rings visible on their stumps. All three trees were at least 300-350 years old.

We now are confident that 24RA283 is not eligible for the National Register of Historic Places for the following reasons:

Marcella Sherfy
Page 2
June 4, 1993

- 1) The site exists on a steep hillside where the terrain precludes the possibility of significant archaeological deposits.
- 2) The site's integrity and appearance was severely compromised when the three scarred trees were harvested.
- 3) 24RA283 was originally determined eligible for its Criterion D values, primarily its ability to yield specific dates for the evidence of cambium peeling at the site. We now know that the scar on Tree #1 is 100+/- 10 years old, and that all three trees are at least 300-350 years old.

We ask for your concurrence that scarred tree site, 24RA283, be considered not eligible for the National Register of Historic Places under Criteria A, B, C, or D. If you have any questions, please call Jon at 444-6245.

Edrie Vinson

Edrie L. Vinson, Chief
Environmental and Hazardous Waste Bureau

ELV:D:ENV:155.gg

cc: David S. Johnson, P.E., Preconstruction Bureau
James T. Weaver, P.E., Missoula District Engineer
Clarence Woodcock, Flathead Culture Committee
Kathleen Fleury, Coordinator of Indian Affairs

CONCUR
MONTANA SHPO

DATE *6/10/93* SIGNED *J. Rupp*



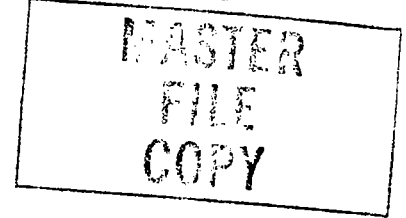
Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Kathy
Marc Racicot, Governor

40 RA @

DEC 22 1993



December 16, 1993

Marcella Sherfy
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: F 7-1(41)16
Conner - North & South
Control No. 1281

Enclosed is the amended site form for the Whitesell Ditch Flumes (24RA281). In our April 8, 1993 letter we notified your office of the destruction of the majority of the ditch channel by logging activities. We also stated that we would revise the site form to include the new information. We are recommending only the flumes as eligible for the NRHP under Criteria A and C and request your concurrence.

If you have any questions, please contact Jon Axline at 444-6258.

Gordon J. Stockstad, Acting Chief
Environmental & Hazardous Waste Bureau

GJS:JA:D:ENV:9.yb

Enclosure

cc: Robert C. Lajoie, Missoula District Engineering Supervisor
Carl S. Peil, P.E., Preconstruction Bureau

CONCUR
MONTANA SHPO
DATE 1/4/94 SIGNED R. Huppe



Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

December 15, 1994



Stan Wilmoth
State Historic Preservation Office
Montana Historical Society
1410 East 8th Avenue
P.O. Box 201202
Helena, MT 59620

Subject: Connor North and South
F 7-1(41)16
Control Number 1281

This letter is written in regards to Prehistoric Site, 24RA277, located in T. 2 N., R. 20 W., Section 22, along Highway 93 in Ravalli County.

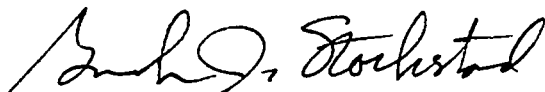
The site is located on a more or less disturbed terrace on the east bank of the East Fork of the Bitterroot River. It consists of a small collection of artifacts found by the landowner in the course of leveling his yard. The artifacts include several projectile point preforms, a couple of biface fragments, several flakes, and a piece of ground stone in the form of a mano. The cultural material **does** appear to be local in origin.

However, considerable question remains about the exact provenience of the artifacts. According to the HRA report the artifacts came from a small dugout area on the east side of Highway 93 at the toe of the canyon wall. This area is called "dirt quarry with artifacts" on HRA's sketch map of 24RA277. Only a small amount of fill has been removed from this spot (a couple of cubic yards at most). HRA archaeologists were unable to locate a single sign of cultural material in the area. It has been reported that some or all of the artifacts might have come from another source of fill dirt that the landowner procured on the **west** side of the river.

The site has been disturbed by the construction of Highway 93 and construction of the landowner's home and yard. In addition, it seems likely that some of the artifacts examined by HRA came from fill obtained on the west side of the river. Site 24RA277 appears to have been disturbed to the point that its integrity is compromised. In addition, none of the artifacts found at the site are temporally diagnostic. We therefore recommend that 24RA277 is not eligible for the National Register of Historic Places, under Criteria A, B, C, or D.

Wilmoth
Page 2
12/15/94

If you have questions, please call Jon Axline at 444-6258.

for 
Joel Marshik, Manager
Environmental Services



State Historic Preservation Office

Montana Historical Society

1410 8th Avenue • PO Box 201202 • Helena, MT 59620-1202 • (406) 444-7715 • FAX (406) 444-6575

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January 10, 1995

JAN 12 1995

Joel Marshik, Manager
Environmental Services

ENVIRONMENTAL BUREAU

MDT

POB 201001

Helena, MT 59620-1001

cc: Jim Weaver
Reconstruction

RE : Connor North and South
F 7-1 (41) 16
Control # 1281

Dear Mr. Marshik:

We **concur** that 24RA277 is **Not Eligible** for listing on the National Register of Historic Places. The area has apparently undergone extensive previous disturbance including construction of Highway 93, a residence, and associated yard and garden development. The inventory report (HRA) indicates the high probability that the artifacts (none of which are significant or diagnostic alone) were once located east of the existing highway in a highly disturbed "dirt quarry" and transported as fill; additional fill was obtained from the west side of the river. We would like to recommend the area be reconsidered if Alternate E is modified or should impacts to the area broadened in scope in the course of any future projects.

Sincerely,

Stan Wilmoth, Ph.D.
Archaeologist

Copy: Salish Culture Comm.

File: MDT/Conner N&S



Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Stan
Marc Racicot, Governor

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JAN 06 1995

JAN 3

1995.



December 29, 1994

ENVIRONMENTAL BUREAU

Marcella Sherfy
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: F 7-1(41)16
Conner - North & South
Control No. 1281

In 1989, Historical Research Associates recorded a rock overhang and possible burial site on U.S. Highway 93 during the cultural resource survey for the above project. Because of the concerns expressed by the Kootenai-Salish Culture Committee, however, no testing to resolve the National Register eligibility of the Robbins Gulch Site (24RA279) was performed.

After further review, we have concluded that the Robbins Gulch Site is located outside the Area of Potential Effect (APE) for the above project. Therefore, no archeological testing is necessary to determine its National Register eligibility. The preliminary plans indicate that the proposed centerline would be relocated ten-feet further away from the site. The existing centerline is $200 \pm$ feet from 24RA279; the proposed centerline would be located $210 \pm$ feet from the site. The proposed construction limits are located well away from the site. As an added precaution, we will draft a special provision to the contract to insure that the site is not disturbed regardless of its proximity to the APE.

If you have any questions, please contact Jon Axline at 444-6258.

Joel Marshik
Joel Marshik, Manager
Environmental Services

CONCUR
MONTANA SHPO

DATE 1-5-94 SIGNED *Stan Wilk*

cc: James Weaver, P.E., Missoula District Engineer
Carl Peil, P.E. Preconstruction Bureau
Clarence Woodcock, Flathead Culture Committee
Patricia Hewankorn, Kootenai Culture Committee



State Historic Preservation Office

Montana Historical Society

1410 8th Avenue • PO Box 201202 • Helena, MT 59620-1202 • (406) 444-7715 • FAX (406) 444-6575

RECEIVED

MAR 01 1995

February 22, 1995

Ms. Carol Schull
Keeper of the National Register
National Register of Historic Places
United States Department of the Interior
P.O. Box 37127
National Park Service
Washington, D.C. 20013-7127

ADMINISTRATIVE BUREAU

Dear Carol,

We are writing in response to the request of February 14, 1995 by the Montana Division of the Federal Highway Administration, for our recommendations in the eligibility of the Medicine Tree Site near Darby in Ravalli County. The Darby Medicine Tree Site is one of exceptional historic and cultural significance to the Salish and other native peoples of Western Montana. They consider the Medicine Tree Site to be a place of important spiritualism, vital to their cultural identity and intertwined with the welfare of their community as a whole. These values were first brought to the attention of the Montana SHPO some years ago, by Salish people who were greatly concerned about the tree and the need for its protection. The significance of the Medicine Tree Site as a traditional cultural property has now been documented for National Register consideration, and having reviewed this document, we find support for National Register eligibility according to Criteria A, B and D. We also concur that Criteria Consideration A applies to this site of traditional religious activity.

Criterion A. The Medicine Tree Site appears to us to be a traditional cultural property of great import to the Salish people of Western Montana and their neighbors. A place used for traditional religious purposes, the Medicine Tree Site has been a most important place for seeking spiritual assistance, guidance and renewal, according to oral accounts, since time immemorial.

The religious nature of these values does not diminish the significance of this site, rather it is an extension of Salish worldview, which does not distinguish between the religious and the secular. Thus the spiritual assistance sought at the Medicine Tree lends power and definition to the Salish community as a whole. This relationship of the people to the Medicine Tree fits the very definition of a traditional cultural property -- one that is rooted in history and whose ongoing practice is essential to the

continuance of culture.

For many generations, activities conducted at the Medicine Tree have strengthened Salish identity and helped to shape their culture. However, history of the past 200 years visited many changes on the Salish and other native people in this region. Most wrenching among these were the removal of the Salish from their Bitterroot homeland, and the loss and destruction during the 19th and 20th century, of many traditional places. Through these years, the Salish strove to maintain their relationship to the Medicine Tree, overcoming obstacles of distance and interference by outsiders.

The Medicine Tree Site gains significance as a most important historic property type, representative of other such sites which have been destroyed and lost to the tribes. Today, the Darby Medicine Tree is one of a very few remaining in the Salish homeland. The protection of its living spirit is a matter of grave concern to the Salish and their neighbors; preservation of the tree, and the site itself, is vital to their culture and the continuance of important cultural ceremonies and rituals.

Criterion B. Although not expressly stated in the Medicine Tree document, we find that the Medicine Tree Site gains considerable significance under Criterion B, from its association with Coyote, a spiritual figure prominent in Salish mythology.

The story of Coyote, the mountain sheep and the Medicine Tree is linked to epic stories of Salish creation. These associations with Coyote, a powerful trickster in the oral traditions of the Salish, embed the Medicine Tree in ancient creation lore passed down by the Salish and other tribes of the area, underscoring the longevity of the Salish connection to the Medicine Tree. Such oral stories are powerful mnemonics, instrumental in recording tribal history, educating young people, preserving culture and shaping the future.

Criterion D. Finally, the Medicine Tree Site appears to us to be eligible for the National Register according to Criterion D, for its potential to yield information which would likely expand existing knowledge of the prehistory of the Bitterroot Valley and the Salish people, as well as adding to understanding of the role of medicine trees in the lifeways of native cultures in this region during the prehistoric and historic periods.

This potential would be appropriately explored only by the traditional community, or with their understanding and consent, for any non-cultural activities around the Medicine Tree may pose serious threats to its health, spiritual integrity and cultural use. With the leadership or cooperation of tribal elders and

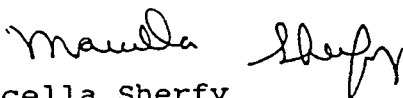
February 22, 1995
Page 3

traditionalists, the potential for interpreting archaeological remains at this site is especially high, given an unbroken continuum of cultural usage. This includes rituals and ceremonies focused upon the Medicine Tree, along with abundant sources of historical documentation which include a rich oral record, and early historic and ethnographic accounts.

Boundaries. The boundaries for the Medicine Tree Site are inclusive of the tree and area of associated cultural activity, although indications are that a greater area may well be used for other traditional activities. The boundaries proposed, which minimally define the Medicine Tree Site appear to be well thought out, making sense both in relation to the use of the site and to the natural features of the surrounding environment.

Thank you for the opportunity to comment.

Sincerely,


Marcella Sherfy
State Historic
Preservation Officer

file: NR/Ravalli Co/Darby Medicine Tree

cc: Karen Atkinson
 Germaine White
 Dale Paulson
 Deward Walker

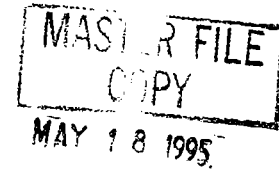


Montana Department
of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Joey
Marc Racicot, Governor

RECEIVED



May 15, 1995

JUN 08 1995

ENVIRONMENTAL BUREAU

Dr. Mark Baumler
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

Subject: F 7-1(41)16
Conner - North & South
Control No. 1281

Enclosed is the Determination of Effect for the above project. We have determined that the proposed project would have **No Effect** to the NRHP-eligible Whitesell Ditch Flume (24RA281) and **No Effect** to the NRHP-listed Medicine Tree (24RA513). We request your concurrence.

If you have any questions, please contact me at 444-6258

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosure

cc: James Weaver, P.E., Missoula District Administrator
Carl Peil, P.E., Preconstruction Bureau
Joel Marshik, P.E., Environmental Services
Gordon Stockstad, Resources & Permitting Section
Dale Paulson, FHWA
Clarence Woodcock, Flathead Culture Committee w/attach.
Karen Atkinson, Confederated Kootenai-Salish Legal Office w/attach.

CONCUR
MONTANA SHPO
DATE *6-15-95* SIGNED *Joel Marshik*

E.O. 11593

DETERMINATION OF ELIGIBILITY NOTIFICATION

National Register of Historic Places
National Park Service

Name of Property: Medicine Tree Site

Location: Ravalli County

State: MONTANA

Request submitted by: FHWA/Dale Paulson

Date received: 3/2/95

Additional information received:

Opinion of the State Historic Preservation Officer:

☒ Eligible ☐ Not Eligible ☐ No Response ☐ Need More Information

Comments:

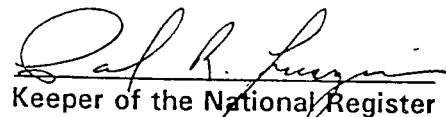
The Secretary of the Interior has determined that this property is:

☒ Eligible Applicable criteria: A, B ☐ Not Eligible

Comments:

See attached comments

☐ Documentation insufficient
(Please see accompanying sheet explaining additional materials required)


Keeper of the National Register

Date: 4/13/95

DETERMINATION OF EFFECT

Conner - North & South

F 7-1(41)16

Introduction

The Federal Highway Administration (FHWA) and the Montana Department of Transportation (MDT) intends to reconstruct and widen 9.01± miles of U.S. Highway 93 in Ravalli County, Montana. The proposed project would begin at Milepost 16.24± and proceed northerly to Milepost 25.25±. The existing roadway was constructed by the Forest Highway Program under two projects in 1936 and 1937; it was improved in 1939. The existing roadway consists of a 24-foot wide paved surface with two 1-foot gravel shoulders. Figure 1 shows the project area.

The Conner - North & South project would generally follow the existing alignment, except in the vicinity of Milepost (MP) 20.5 where it would be realigned to avoid impacts to the Medicine Tree (24RA513). It is the intent of the project to reconstruct the two lane roadway to a 40-foot paved surface (two 15-foot driving lanes and two 5-foot shoulders). From the MP 16.24± to MP 18.2 the proposed centerline would be located on the west shoulder of the existing roadway. From MP 18.2 to MP 25.25 the proposed centerline would be located on the east shoulder of the existing roadway. Additional Right-of-Way (R/W) would be required throughout the proposed project area.

Five alternate routes were initially proposed for this project to avoid impacts to the Medicine Tree (24RA513), a traditional cultural site considered important to several Native American tribal groups in the Pacific Northwest and northern Great Plains. Alternative E was selected by the Montana Highway Commission in late 1994 (Figure 2). Alternative E would cross the river at MP 20.4 and place the alignment west of the East Fork of the Bitterroot River; it rejoins U.S. Highway 93 at MP 21. The realignment would impact one residence before rejoining the existing alignment.

Significant Cultural Resources

Cultural resource inventories of the project area were conducted in 1989, 1990 and 1991. The MDT and the Montana State Historic Preservation Office (SHPO) concurred in the National Register of Historic Places (NRHP) eligibility of one historic site: the Whitesell Ditch Flume (24RA281).

The Whitesell Ditch Flume was constructed in the late 1880s or early 1890s. The site is an excellent example of a timber box and trestle-type flume. The site has been abandoned since the early 1970s. Although long-neglected, it retains integrity of location, setting, feeling and association with the early agricultural development of the upper Bitterroot Valley, the site is eligible for the NRHP under Criteria A and C.

The Medicine Tree (24RA513) is considered a Traditional Cultural Property by regional Native American groups and is protected under the American Indian

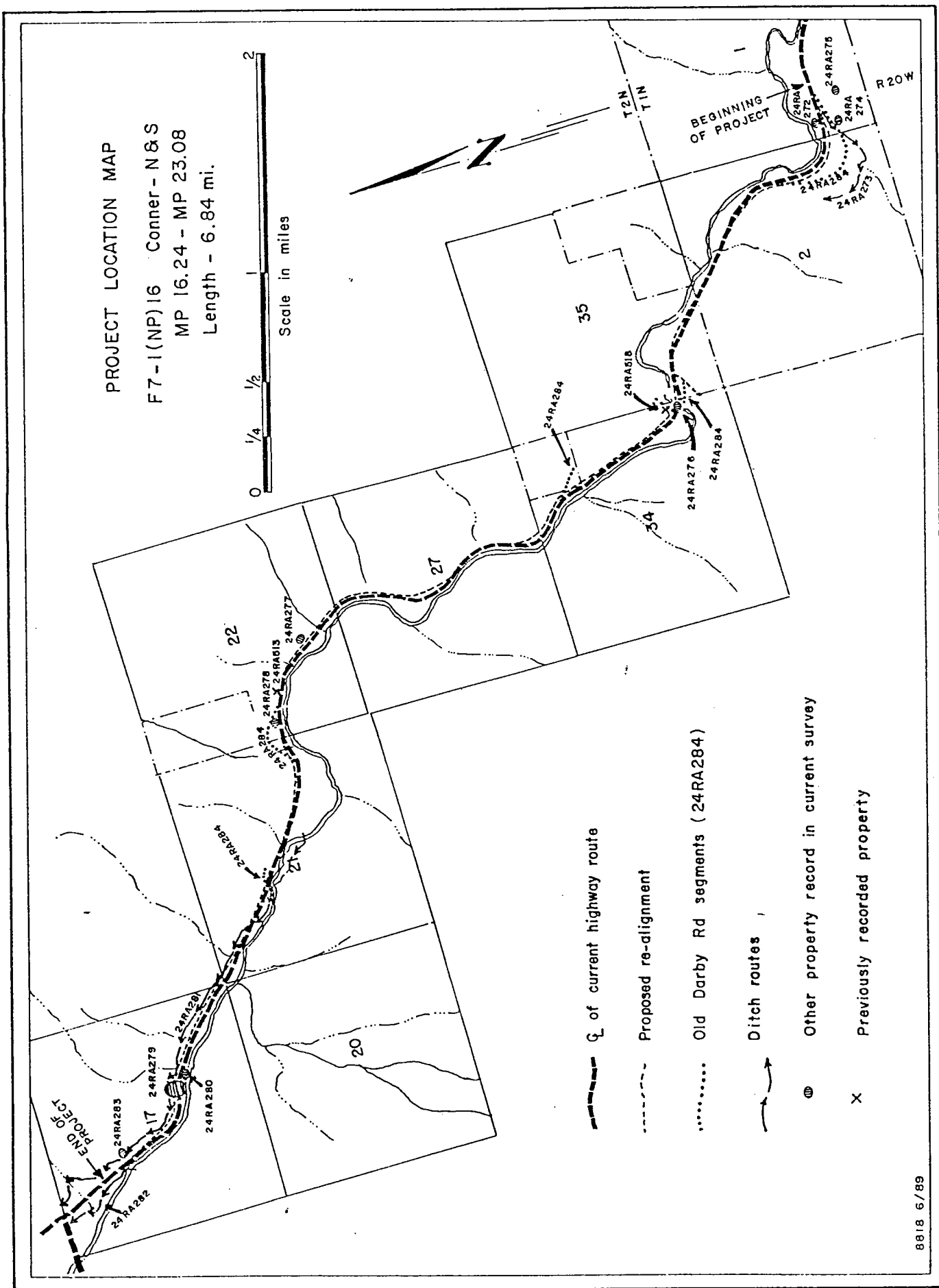


Figure 1. Project area location map.

Religious Freedom Act (1978) and the National Historic Preservation Act (1966). The Medicine Tree was listed on the National Register of Historic Places in April, 1995. The site boundaries include the 25 acres immediately surrounding the tree and east of the East Fork of the Bitterroot River. The alternate alignment proposed for this project would be located west of the site boundaries.

Project Impact

The preliminary design for the Conner - North & South project has been completed and copies of the plans in the vicinity of the cultural resource sites are included (Figures 2 & 3).

The Whitesell Ditch Flume is located on the face of a cliff approximately 150± feet from the existing centerline. The majority of the structure lies outside the impact area of the proposed project. The existing centerline would be perpetuated; there would be no encroachment on the site as a result of the project (Figure 3).

Of the five alternate alignments initially proposed at the Medicine Tree, Alternative E was selected because it would have minimal impact on residential development in the area and would bypass the Medicine Tree. Alternative E would relocate the centerline across the Bitterroot River from the existing alignment. The proposed alternative would deviate from the existing U.S. Highway 93 alignment at MP 20.4, approximately 1,500± feet south of the Medicine Tree. The proposed centerline would be located across the East Fork of the Bitterroot River, approximately 480± feet from the tree; the proposed pavement edge would be 460± feet from the site. The proposed alignment would rejoin U.S. 93 at MP 21.0, approximately 2,400± feet north of the Medicine Tree (Figure 2).

Project Effect

There would be **No Effect** to the Whitesell Ditch Flume (24RA281). Most of the site is located on a cliffside above the Present Traveled Way (PTW). At its closest approach the flume is 150± feet from the roadway. There would be no encroachment on the site as a result of the project. A two-lane roadway on the same alignment would be perpetuated and the setting would remain intact. The flume would retain its appearance to and from the roadway. There would be no transfer, lease or sale of the property as a result of the proposed project.

There would be **No Effect** to the Medicine Tree. Alternative E would be located on the opposite side of the East Fork of the Bitterroot River to avoid any impacts to the tree. The proposed alignment would, in fact, augment its use by Native Americans by removing the road from the proximity of the Medicine Tree. Although the setting would be impacted, it would not constitute an adverse effect because the site's function as a sacred place would be perpetuated and increased. The realignment would also improve the tree's health by increasing its water supply through the root system and possibly prolong its life by removing it from its proximity to traffic on U.S. Highway 93. Many of the qualities that make the tree important to Native Americans would be restored by allowing them to conduct religious ceremonies without intrusive traffic noise, sight-seers and danger from moving automobiles.

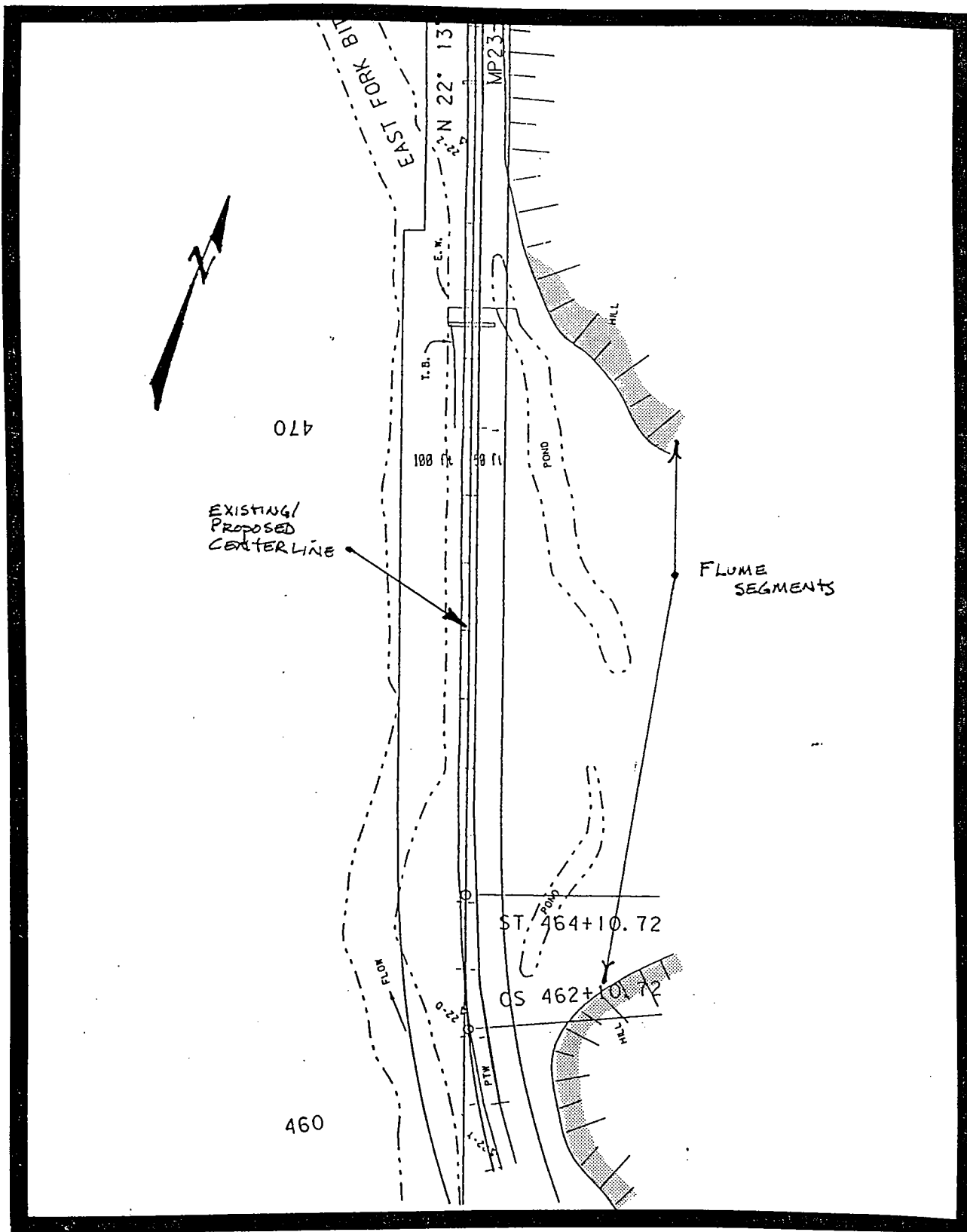


Figure 3. Map showing location of Whitesell Ditch Flume (24RA281) and existing/proposed centerline.



Montana Fish, Wildlife & Parks

MASTER FILE
COPY

RECEIVED

OCT 23 1998

ENVIRONMENTAL

cc: Carl Peil
Jim Weaver
Hydraulics
Karl Helvik
Mark Traxler

1420 E 6th Ave
PO Box 200701
Helena MT 59620-0701
October 21, 1998

Gordon Stockstad, Supervisor
MDT Environmental Services
Resources & Permitting Section
2701 Prospect Ave.
PO Box 201001
Helena MT 59620-1001

RE: Conner North & South
F7-1 (41) 16
CN# 2427

The following comments are for your consideration in designing the proposed project near the "Medicine Tree". We are not opposed to a retaining wall at this site, however, we are concerned about possible impacts caused by the retaining wall downstream and on the opposite bank during a flood. We also need additional information as to the type of retaining wall that is being proposed. (We do not favor use of gabion baskets).

We feel that mitigation is appropriate because of unavoidable impacts to the river. As mentioned in previous correspondence, MDT should look into the possibility of re-establishing river length by diverting the river into old river meanders that have been cut off. Stabilization of the opposite bank would also be beneficial. We will gladly work with MDT to develop suitable mitigation.

We appreciate the opportunity to comment.

Sincerely,

Glenn Phillips, Chief
Habitat Protection Bureau
Fisheries Division

cc: Region 2- Don Peters
Christ C-C
Jeff Ryan - DEQ

3/c



Montana Fish, Wildlife & Parks

1420 East Sixth Avenue
P O Box 200701
Helena MT 59620-0701
April 26, 2002

717

Wendy Wallach
Environmental Planner
216 16th Street, Suite 1700
Denver, CO 80202

RE: Conner North & South Environmental Assessment

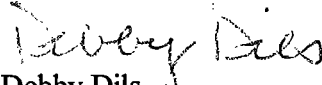
Dear Ms. Wallach:

Montana Fish, Wildlife & Parks received your letter on the above project. It is difficult for us to respond to inquiries without legal descriptions including township, range and sections. However, we believe FWP does have two Fishing Access Sites in the vicinity of the proposed highway project: Forest Cooper Fishing Access Site and Hannon Memorial Fishing Access Site.

Hannon Memorial was acquired and developed with Land and Water Conservation Funds and thus would qualify for special treatment under the 6(f) mitigation requirements. Please contact Walt Timmerman at the address shown above for coordinating these requirements. Maps of both sites are attached for your reference.

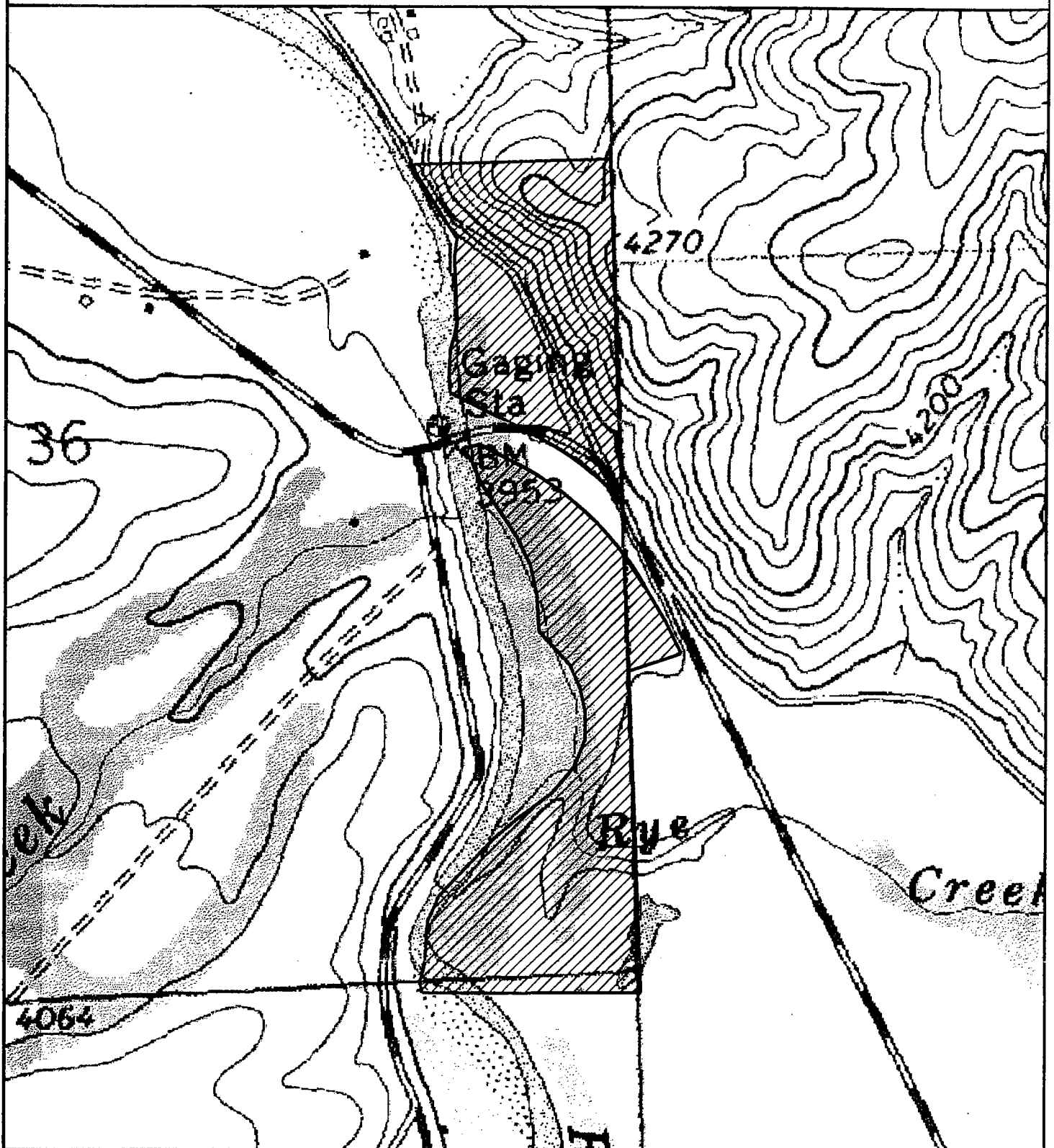
Thank you for the opportunity to comment.

Sincerely,

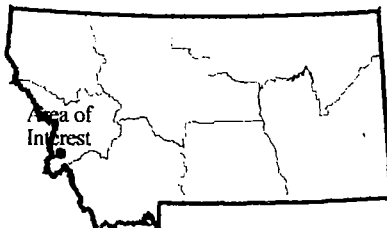

Debby Dils
Land Section Supervisor

Cc: Walt Timmerman

Hannon Memorial FAS



Lands File Number: 2285
T3N/R21W

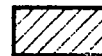


57.844 acres



Fee Simple
FAS Parcel

0 acres



Leased
FAS Parcel

0 500 1000

Scale in feet
Scale 1:8000

Fishing Access Sites (FAS) are digitized and maintained by the Information Services Unit of the Montana Fish, Wildlife and Parks. FAS's were digitized at 1:24,000 using the COGO module of Arc/Info. The background image is a USGS 7.5 minute quadrangle digital raster graphic.

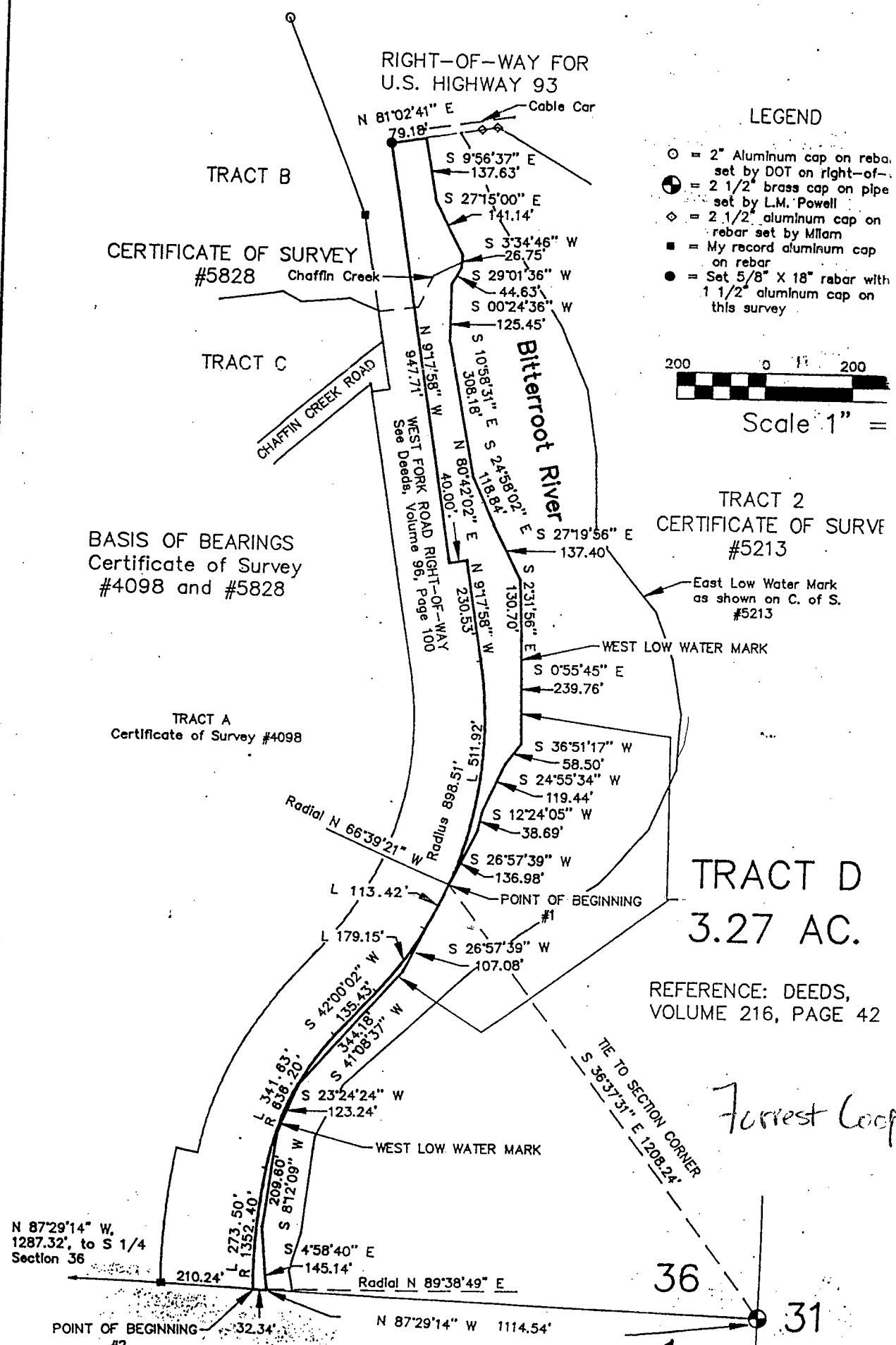


**Montana Fish,
Wildlife & Parks**

Map produced by NRIS,
request# 001WP6 - September 22, 1999

CS # 5946 TR

This sketch is provided, without charge, for your information. It is not intended to show all matters related to the property including, but not limited to, area, dimensions, easements, encroachments, or location of boundaries. It is not a part of, nor does it modify, the commitment or policy to which it is attached. The Company assumes NO LIABILITY for any matter related to this sketch. Reference should be made to an accurate survey for further information.



LEGEND

- = 2" Aluminum cap on rebar set by DOT on right-of-way
- ⊕ = 2 1/2" brass cap on pipe set by L.M. Powell
- ◇ = 2 1/2" aluminum cap on rebar set by Millam
- = My record aluminum cap on rebar
- = Set 5/8" X 18" rebar with 1 1/2" aluminum cap on this survey

200 0 200
Scale 1" =

TRACT 2
CERTIFICATE OF SURVEY
#5213

East Low Water Mark
as shown on C. of S.
#5213

WEST LOW WATER MARK

TRACT D
3.27 AC.

REFERENCE: DEEDS,
VOLUME 216, PAGE 42

Forrest Cooper

36

31

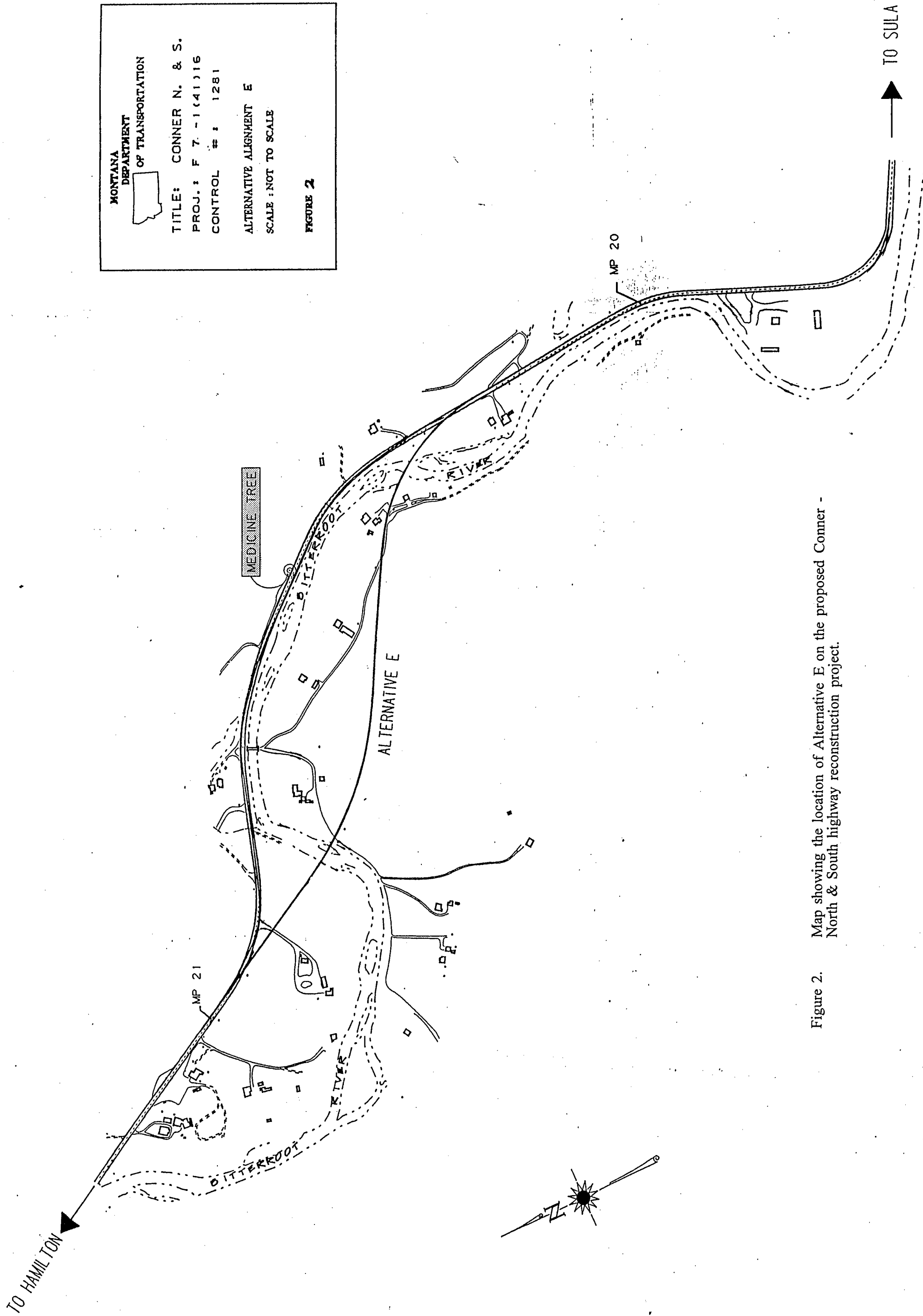


Figure 2. Map showing the location of Alternative E on the proposed Conner - North & South highway reconstruction project.

Appendix B: Meeting Transcripts

**MINUTES
CONNER NORTH & SOUTH PROJECT
FIRST PUBLIC INFORMATIONAL MEETING**

Thursday, December 7, 2000

5:30 - 8:00 p.m.

**Wesleyan Church,
Darby, MT**

A Public Informational Scoping for the Conner North & South Project was held in Darby, MT December 7, 2000, at the Wesleyan Church. Forty one (41) people attended the Public Meeting (sign in sheets attached) which was an open house format, a formal presentation was given at 7 p.m.. A Meeting Agenda and a copy of the Newsletter was available to the public at the sign-in table (attached). Comments were received from the public by way of (1) personal comments given to project officials on 5 x 8 cards which were immediately displayed in the comments section wall area for the public to view, (2) written comments dropped in a comment box , and (3) comments made during the public presentation were noted and are attached. Officials responsible for the project from MDT and Carter Burgess were available throughout the evening to answer questions, receive comments, and talk with the public about any concerns they had regarding the project:

Project officials present:

- Joel Marshik, MDT (Helena)
- Loren Frazier, MDT (Missoula)
- Susan Kilcrease, MDT (Missoula)
- Maureen Walsh, MDT (Missoula)
- Dave Dreher,, MDT (Helena)
- Bill Squires, MDT (Helena)
- Dennis Foy, MDT (Helena)
- Steve Platt, MDT (Helena)
- Mark Traxler, MDT (Helena)
- Catherine Cox, Carter & Burgess (Denver)
- Brook Mulford, Carter & Burgess (Denver)

The following Information was available to the public on the sign-in table:

- 1) Agenda for the meeting (attached)
- 2) Newsletter (attached) which included the following:
 - Study Area (graphic)
 - Introduction to the Project
 - Public Involvement Process

Project Contacts
Environmental Process
Issues to be addressed by Environmental Process

3) Public Hearing Comment Sheet (attached)

The 6 wall display areas explaining the project for public viewing were as follows:

1) Project Introduction:

Purpose of Meeting

- Provide description of the process
- Describe transportation needs
- Obtain input on project issues
- Present build alternative
- Obtain input on alternatives

Contents of an Environmental Assessment

- Define purpose and need for project
- Build alternatives & no-build alternative
- Land use
- Social
- Environmental justice (Executive Order 12898)
- Economic (business considerations)
- Pedestrians & bicycles
- Wildlife/fisheries
- Flood plains
- Construction impacts
- Threatened & endangered species
- Historical & archeological
- Farm land
- Cumulative impacts
- Visual resources
- Right-of-way
- Parks & recreation
- Hazardous waste
- Noise
- Water resources/quality
- Wetlands

Existing Roadway Issues

- Lack of adequate shoulders
- Sharp curves limited visibility
- Deficient bridge at east fork bitterroot river

- Poor pavement conditions
- Icy road conditions
- Animal collisions
- Improve traffic operations
- Lack of mailbox turnouts
- Improve safety of access
- Accommodate growing traffic volumes
- Provide for system continuity

Project Considerations

- Improve safety by addressing the current deficiencies
- Address structural & operational issues
- Operational issues of bridge over east fork of Bitterroot River
- Minimize adverse environmental impacts
- Tourists & summertime traffic
- Impacts to travel & access during construction
- Changes to visual character of highway
- Traffic growth
- Impacts to private properties & private improvements
- Impacts to the Medicine Tree

Public Involvement Opportunities

- Comment contacts
- Newsletters
- Small group meetings
- Public open house meeting to be held periodically

Aerial Map of project location

Visual Display

- Pictures of roadway
- Study area existing conditions

Environmental Assessment Schedule

#2) Build Alternative

Aerial maps with visual road alignment changes

Graphic Wall Display of Typical Section

No. #1 – 40"

No. #2 – 60' – typical 4-lane passing section

No. #3 – 40'

#3) Roadway Needs

Mountain Highway Level of Service definitions

- Roadway segment operating characteristics

Graphic – Traffic Data

- Average daily traffic volumes (1993-1999)
- Average daily traffic volumes predicted (2000-2024)

Graphic – Traffic Classifications

- Passenger cars 65.2%
- Recreational vehicles & commercial trucks 4.2%
- Tractor trailers 5.0%
- Pickups & trailers 25.6%

#4) Environmental Considerations

Graphic of project environmental considerations

Graphic – Gabion Wall examples

#5) Medicine Tree

Graphic of the Medicine Tree

#6) COMMENTS RECEIVED

Traffic/Safety

It is a pretty bad road with no shoulders and guardrail.

Horizon site distance rock cuts.

There is no place to go if there is an accident or mechanical problem.

Hard to see Conner cut-off approach.

Icy corners cause many accidents

Most accidents happen between milepost 21 & 22. Also 39 accidents have occurred near sawmill driveway between milepost 19-20 in about 15 years.

The Dixon Creek Bridge – safety issue with egress and ingress. Residents want it looked in relation to the whole picture of the project. It may need a turn lane added.

Do you think you could do something at the Conner cut-off to make that road a little bit easier to locate both south and north? It is really hard to see both day and night.

You would think with the slower speed we have now, safety would be more prevalent. With straightening out the road, safety is going to go out the window somewhat as we pick up the speeds.

What about using guardrails on the steep sections?

Design:

Will there be any new Public Fishing Access sites developed?

How wide will the shoulders be?

Where will guardrails be located?

A culvert for the Sula VFD would be great for water access.

Build a 4-lane all the way and get it done now so we don't have to come back and re-do it in a few years.

Robert Norton made this comment: Portions of a 4-lane are a bad idea.

Are there any plans to replace the Medicine Tree Bridge – the one that is at the Medicine Tree Ranch? There have been a couple of accidents there with people turning in and out.

How much right-of-way are you taking?

On the curve between 440 and 450, there have been several accidents with people going into the river. You might want to consider straightening it out a little more and adding a retaining wall for safety and sight distance.

How many passing lanes will there be? Will they be 3-lanes or 4-lanes? I think 3-lanes would be preferable.

When you design a road, how far into the future do you design for and what do you expect the capacity to be?

Wildlife Issues

Does this project go as far south as the big horn sheep herd? Concern about the impact on the sheep herd with faster traffic.

As speed increases on this road, what is going to happen to our wildlife? What measures of prevention are you going to take to prevent worse accidents from happening? Since the speed is going to increase obviously the casualties will increase, what are you going to do about the unnecessary death of wildlife?

I've seen people sitting on the road stopped to take a picture of deer or sheep and scenery. This is very dangerous.

If you put a shoulder on, are you encouraging more people to stop and take pictures of wildlife?

When I drive this road, I know there are animals on it and I know where the sheep are going to be most of time and I know there are some standard crossing areas. Can we be sure, when we do this project, that this is taken into consideration? Possibly some additional signage can be added saying this is a wildlife area.

Do we have to wait until animals are killed before putting up signs? Can't we put them up before we kill these animals?

Bike/Ped. Path

What side of the highway are the bike lanes on?

Will bike lanes extend all the way to Sula?

I have an issue with bicycles on this stretch of road. It is dangerous and I want the state to do something about it. Possibly put up signs that say "no bicycles allowed".

Make the bicycles buy tags so they have to pay taxes the same as I do to use the road.

How many bicycles use this road? Have there been any studies done on that? Possibly you could add an extra 4-5 feet to the road just for bicycles.

Aesthetics

Robert Norton made this comment: This is a scenic area. Too beautiful to be spoiled.

You are taking quite a bit of my property and my trees that act as a noise buffer in front of my house. I'm not very happy about that and it will probably end up a legal issue.

What are the chances of nixing the whole project and designating this as a scenic highway? Who do we talk to about having that done?

On the easement areas, how are those treated? Are they just hydroseeded? What happens to those areas?

There is a specifically nice tree that is far enough on the bank to not interfere with the road. Can it be left?

What about utilities?

River

Leave the river alone, do not disturb it. If at all possible leave its integrity intact.

Can the integrity of the river be maintained?

What will the impacts be to the river and how much of the Gabion wall are you talking about?

Will some of the natural river course be taken or changed?

How do you define a wetland?

Are you familiar with the wetlands section between Conner and Robbins Gulch on the west side of the highway?

In your consideration of the highway construction, which has the stronger lead precedence – moving away from a wetland toward the river or visa-versa?

Schedule

Based on construction taking place in 2005, when might condemnation take place?

Can you start building it next year?

How much time is this project going to take and how much are we going to be inconvenienced?

Historic Concerns

Apple Tree 1890, Historic Register Station 367-368 It.

There are pictographs on rocks on east side of road just south of milepost 18.

Construction

Michael Jennings & Darlene Lister made the following comment: Station 130+00+.

Concerns on R/W – approaches and locations width.

Need to get customers in and out of business – delivery trucks, RV's and trailers in and out. .

Concern - Our well is 10' from R/W – community well – with construction limits.

Parking – if we buy R/W can we expand parking?

Will they be closing the road during construction?

How will businesses along the highway be impacted by the construction? Some of them depend on a steady flow of traffic.

Will you have pilot cars?

What is the start time on the construction?

I was told something today that the Lewis and Clark Celebration in 2005 will totally fill the traffic on this road, so if the construction starts in 2005, is this going to be a real nightmare?

General

How does the noise and trees cut down impact the value of our home?

What is the flood impact downstream from the Gabion Wall?

Dan Weer, P.O. Box 7, Darby, MT 821-3617

Gravel Source

Wetlands mitigation. Call to schedule meeting

Will someone be visiting us personally about the right-of-way? Do we have to make and appointment or what?

If you are going to take someone's property, what is the process that is done? How does that work? Do you offer fair market value for property taken?

When we get this all done and the speed limit increases, do we pick up all the dead animals?

Legally, how close can a residence be to the highway? What is the legal limit? Construction and structures, how close can they be to the highway?

What is the forecasted growth of traffic patterns on this highway?

What are the average and percentages of growth over the next 20 years? Are we looking at having more and more traffic all the time and what are the percentages?

Is the growth of the valley as a percentage of increase in population we've had in the valley spreading up this way?

Why was this section of road identified as one that has to be replaced?

Given the hardships a lot of people suffered because of the fire here, this project is going to create a lot more hardships on people. What are the chances of keeping this road just the way it is and just maintaining it? It seems to me that we are just inviting more traffic and more problems. It's just that these hardships are coming a little too close together.

Instead of dancing around the issue, being that this is a federal highway isn't there some obligation to the federal government as far as upgrading this highway because it is a main thoroughfare?

Is there a possibility to garner some funds out of this project to go towards public transportation on this section of road? Possibly a bus route during ski season?

What is the follow-up public input process for this EA? When do we respond to plans?

Written Comments - attached

PUBLIC PRESENTATION TRANSCRIPT

A brief presentation of the project was given to the public at 7 p.m. A transcript of that presentation follows:

Catherine Cox: Good evening, thank you for coming out. My name is Catherine Cox. We have a short presentation for you and then you can get back to talking with the engineers, planners, and designers. I would like to introduce a few people – Bill Squires, Loren Frazier, Joel Marshik, as well as a lot of other folks here that can answer your questions this evening.

We are here tonight for several reasons: 1) MDT wants to present the new alternative they are pursuing through this corridor. I know there are some years of history here -- maybe 5-6 years ago, there were several alternatives presented and commented on. So I think you will be pleased to know that this generally follows the existing roadway and centerline. 2) We are also here to solicit comments and input from you folks in the community. We need to know what you feel about this, how you feel about this, and any suggestions, and receive comments you have concerning the proposed project.

We are going through an Environmental Assessment process. This means that we will address all social, economic, and environmental impacts that this alignment may pose to your community. As we move through the draft EA process, we will have another open house or public-type meeting sometime in February 2001. Then once we release the Environmental Assessment, we will probably have another public hearing in March 2001. We encourage you to stay involved, be up-to-speed on the project, and communicate with myself and any of the other MDT folks you see here tonight. Now I will turn this over to Loren Frazier, the Missoula District Administrator for the Department of Transportation.

Loren Frazier: I started as District Administrator when Jim Weaver retired. I'm sure you all remember him -- he was here for 12 years. I started in February and one of the things we looked at right away was this project. I looked at how everything was just hanging down here and that there were several alternatives out, and I felt we owed it to the you to get the process going and try to get this EA done so we can get a decision and get on with our lives. Funding for this project is out four years, maybe five.

Our biggest reason for being here is that we felt this things has been kicked around for at least 15 years and we ought to get some kind of decision and

move on. The other thing is that we finally reached an agreement on the Medicine Tree issue and we now have a proposed solution. That is the drawing we have on the wall with two cars and a tree – we have put a noise wall in and conveyed ownership of the tree itself to the tribe. The tribe also bought the adjoining property. So it looks like we are nearing resolution of that issue. That was one of the key things we looked at here and also getting the rest of this project decided.

We have been taking comments from people tonight and putting them up on the wall. I would welcome all of you to give us your comments. We are here to collect your comments and it certainly helps us. You can write them down yourselves on the comment forms, or you can get one of us to write them down on a card and put it up on the wall. That way we can get a record of them. There are comment sheets you can take with you when you leave so if you think of something a day or two from now you can write it down and mail it in to us.

Catherine Cox: I will turn it over to Bill Squires who will walk you briefly through the proposed design and then we will take questions and if you prefer we can break back up into an open-house type format so you can get some one-on-one interaction.

Bill Squires: I'm Bill Squires with the Road Design Section in Helena and I am heading up the design on this project. Basically the project is to reconstruct this stretch of Hwy 93 north from milepost 16.24 to milepost 23.24. At the cutoff road to Conner that is where we will actually rebuild the existing road. From that point to the bridge we will widen the shoulders. We rebuilt that road about ten years ago and only put two-foot shoulders on it. We are just going to put in some gravel and widen it. No right of way will be needed on that portion of it, just wider shoulders. Referring to an aerial map – the green line is an approximation of our proposed new centerline. Generally we are trying to get the centerline away from the river. The dark green with white dashes represents areas where we will put in Gabion walls to reduce or avoid encroachment on the river. In some of the areas we will have some pretty good rock cut – milepost 17 is the first one. The yellow areas are possible passing lanes – a four-lane section will go in there. We are not committed to doing that yet, it is just something we are looking at. The traffic projections show that in twenty years as the traffic increases there are not a lot of passing opportunities on this section. When can get long lines of traffic built up then you get people taking chances. A passing lane or two might curtail some of that impatient driving behavior if they know they have an opportunity to pass a few miles down the road. This one is only about 8/10th of a mile of long. We normally like to make them

about a mile long at least, so that one may not fly. There may be better sections to look at, for example from milepost. 21 to mile post 22.2. But we may want to purchase enough right-of-way to do it in the future if we don't do it now.

We are shifting away from the river where the new center line will be on the edge of the pavement on the opposite side from the river around 10-12 feet -- some places will be a little more and some a little less. Right along here (showing map) there will be another rock cut and here is some more Gabion walls. Here is the new bridge. Through here we will have new shoulders and continue on to milepost 19.

Question: What are you going to do with the Dixon Creek Bridge – right on the curve?

Bill Squires: I don't think are affecting it. We are moving away from it so I doubt we will affect the bridge.

Question: It is a dangerous spot to turn in and out of right now. If you widen that road with the speed, there might be a problem going around there. How far out are you going to widen it?

Bill Squires: I have to look at the cross sections but we will be putting eight-foot shoulders on it.

Question: So you will make them a turnout lane?

Bill Squires: People do use them to get off the main lanes and make a turn.

Question: Are there plans to replace the Medicine Tree Bridge -- the one that is at the Medicine Tree Ranch?

Bill Squires: No. If we were impacting it with our project, we would be replacing it. But I don't think we are.

Comment: That bridge terminates right on the edge of the road. We have had a couple of accidents where one person was trying to turn and another person hit them. If you start widening that road it creates a problem with the density of traffic, I think there needs to be some sort of a turn-out lane or something done there.

Bill Squires: We can certainly look at it.

Question: But aren't you moving the road away from the bridge?

Answer: Yes we are.

Question: Are you going to do any river work in there?

Answer: Right now we are showing that we would put a section of Gabion wall in here to stay out of the river.

Question: If you do Gabion wall where that bridge is, don't you have to redo the end of that bridge?

Bill Squires: Well, I don't know that it is going to go that far. Our plans are not that detailed yet to be able to give you an answer at this point.

(Referring to map) At milepost 19.25 we will be putting in a section of retaining wall. Through here we are staying on the east shoulder to stay away from the river but it looks like we will need a little retaining wall on this section. (Referring to graphic) This is a cross section of what the roadway will look like. We will have 8' shoulders, and 12' driving lanes, and flatter slopes. There are virtually no shoulders on the existing road and steep drop offs. This would increase safety quite a bit for people who run off the road.

Question: Then there is no right-of-way change with the wider shoulders? Correct?

Bill Squires: On the portion where we are just putting shoulders on, yes. We have all the right-of-way we need.

Question: Do you think you could do something at the Conner cut off to make that road a little bit easier to locate both south and north? It is really hard to see.

Bill Squires: We will be putting in lights so you could see it at night.

Comment: No, it is bad in the daytime too.

Bill Squires: Is there a sight distance problem?

Comment: It is hard to see because the sign that identifies it is so far back off the road it is hard to see.

Comment: You can't see the road because of all the Cottonwood trees on that corner.

- Loren Frazier: Those are really good comments and that is why we are here tonight to hear things like that so we can look at them. We will have to look into that one when we get along further in design. Thank you.
- Answer: The bridge that we mentioned a few moments ago, the Dixon Creek Bridge, there are approximately 45 families that utilize that bridge. The bridge is in a bad state of repair. We would like some comment out of you as soon as possible on what you are going to do with that bridge?
- Loren Frazier: Is it a county road?
- Answer: No, it is a private road.
- Loren Frazier: It's a private road and a private bridge?
- Comment: There are 45 families that pay taxes and no one will take responsibility for either the road or the bridge. It has always been a bone of contention. But that is not what I'm trying to determine here, I'm trying to determine if in a year or two we need to replace the bridge, but if you are, then we won't have to do it or if you are going to come in here and tear up everything we've done.
- Loren Frazier: According to our plans right now we would not be affecting that bridge. So, if we weren't affecting the bridge, then we would not fix it.
- Question: Are you looking at eight-foot shoulders? How do you put an eight-foot shoulder on our bridge?
- Loren Frazier: We are moving the road away from it and we will widen the road on the other side because we have to stay out of the river.
- Question: But you are going to be putting that 2-family double car port next to the Medicine tree on the other side?
- Comment: The Medicine Tree is right across from it on the other side.
- Question: First of all you widen the road eight feet on each side, then you are putting that wonderful cathedral on the other side, I think you are going to run into a heck of a problem with people trying to get over that bridge. We have 63 property owners on that side of the bridge, each of them driving more than one car per family. Then you've got that little cathedral on the other side, which is good and nice. Then you've got an eight-foot shoulder, and I think we are going to have some problems getting in and out.

- Comment: It would seem to me that you are spending all of your money to rebuild the road and you are not considering how many families live up Dixon Creek. And that doesn't make any sense. You are saying we are going to rebuild the road, the heck with the bridge, the heck with the roadway and it doesn't matter if it is dangerous or not. It seems to me that you must consider Dixon Creek when you build this new road.
- Loren Frazier: We are drawn into a fine line and it is one the attorneys will have to look at. From my understanding, the way public money works, we replace facilities on a public facility or if we are impacting something – if this bridge serves one family or several families, it was built as a private road with private money, and I think I would have a tough time justifying that to the general accounting office in Washington D.C. -- that we are taking public money designated for Hwy 93 and building a bridge for a private land owner. Then we are missing it.
- Comment: I don't think anyone here expects you to do that. We are not asking you to build a bridge, we are asking you to consider the bridge when you build the road. I just don't think you can leave Dixon Creek out of the equation, it doesn't make any sense.
- Comment: They are talking about the safety factor.
- Loren Frazier: Ok, there we go! Then we can say it is our duty on the highway to provide safe access to that road. It may take a turn bay or turn lane, or some type of way to get in there safely. Then it can be considered in the design of the road.
- Question; Who built the bridge?
- Answer: The Corps of Engineers. Years and years ago, probably before we were born. That bridge at one time belonged to the state, then the county took it over, and then it got into a little deal and the homeowners took it over. But that bridge is definitely a safety hazard with that road – I don't know how much money it will take to cut that hill down and move it over, you might want to change that and put a different bridge in down the road.
- Loren Frazier: It sounds like you have a lot of details to work out on this issue. It is a sticky issue that we aren't going to solve tonight.
- Question; Does that impact that particular bridge any more than any other private road intersecting the highway at a normal 90-degree angle? It is the same thing?

- Rep. Rick Laible: I think basically what you are saying is that for whatever property owners are on the road, because of your expansion, if you impact them then what you will try to do is to mitigate what you are doing? As an example, there is a couple who owns a store on this road, and they could loose almost all their parking. So there has to be some accommodation so that we make sure we don't impact their business because they don't have parking and provide safe egress and ingress for them. That is same thing that Mr. Tolliver is talking about as far as that bridge is concerned. There are quite a few families that alive up there and I think it is the responsibility of the department to provide safe egress and ingress to those families. And that is the same for every one of the others that access that highway.
- Dave Dreher: I'm with the public involvement office for the department out of Helena. This is precisely what we need here. We need to know areas where we might need to look at putting in a turn bay, or something that will improve safety for the area. We need your comments on all those kinds of things that we can do. Obviously we can't rebuilt a private bridge but there may be some mitigating circumstances where something else may have to happen – I don't know. But we can't rebuild a private bridge. But if there is a safety issue regarding access or if there is a particular area where you know there have been a number of accidents, or if you've got a comment, for example regarding our suggested 4-lane passing area, if you've got a comment or concern about that -- we would like to know what you think about that. Whether it is a good idea or a bad idea, we would like to know that so we can continue to build the best possible design, the safest road for you folks and still accommodate everything that needs accommodated.
- Question: What if everyone who lives in that area signs a petition and gives it to you?
- Loren Frazier: It still gets down to what we look at legally. You just brought up a possibility, and we don't know yet.
- Dave Dreher: It won't hurt to give us that and we will certainly look at it. I can't promise you that it would be rebuilt, but we can look at it.
- Loren Frazier: I think that if you're spending substantial amounts of money in order to avoid rebuilding that bridge, then maybe the offset is, instead of spending money to do a lot of excavation or do a lot of build, then you might be better off in the long run.....
- Comments: I've got two issues but one of them is going to be a personal issue because you are going to cut into my property quite a ways and you are going to

take out my tree buffer for noise on the highway for one thing. But that will probably be a legal issue.

The other thing that I have, and I'm prejudice up front, but I want people to know up front that I hate bicycle riders. I live right down there in one of the areas where it drops off on both sides. I run my company out of my houses and I've watched probably 100 bicycles come down that highway and 50% of those people are lucky they are alive. Anybody that is insane enough and brain dead enough to drive that section of highway deserves to be gone! The highway department needs to get out here and block that issue. I've seen a logging truck come around a sharp corner and nearly take out 15 bicycles. These trucks come through there at 60 mph and the bicyclers are going about 2 mph and here comes a truck 45 feet behind them. It is insanity to let a bicycle on that section of highway even if they widen it.

The other issues I have with bicycles is that they should tag them and make them pay taxes to ride on that road the same as I do. Then I won't have an issue with it. If those bicyclers are going to pay a tag just like I do for my vehicles, I won't say a word. It is still insanity to drive on that road. and they shouldn't allow them on there. It is insane.

Comment: This corridor is listed as a national bicycle route. Why Montana hasn't done something about that, I don't understand.

Loren Frazier; Hwy 83 is listed on there too and that is a dangerous road.

Comment: I've seen cars skid sideways coming around those corners and almost smash into those bicycles. And the bicycles just act like they own the road.

Loren Frazier: It is a public road with public use.

Comment: If you drive in any state in the United States they have signs that say no hitchhikers on this section of highway or no motorcycles, or no bicycles. Come on people, put a sign up and tell them to get out. Then put a highway patrolman down and fine them when they are on the highway. That is common sense.

Dave Dreher: The Department of Transportation has no authority to limit the roads. I know that you have a new legislator here and if you have concerns about it, I would consider talking to him. We need to identify where the power to do something like that lies, and MDT does not have that authority.

- Comment: I have no problem with them if they would pay taxes. Then they take the liability on themselves.
- Dave Dreher: Well, your license plate tax does not really pay for that, it is your gasoline tax. If you have an issue with the bicycles, then I would encourage you to take it to the place where it belongs. We can't deal with it. It is kind of like banning trucks. We can't do that unless it is during certain seasons of the year where it would impact the road. But if we could move on to other specifics of this road, it would sure help.
- Comment: I can remember when bicycles rode facing traffic instead of with traffic. I think on this section of highway it would be safer to ride facing the traffic so you could get out of the way.
- Question: How much bicycle traffic is on this road? Have you done any studies on that?
- Dave Dreher: I don't think we have done any study count on bicycles.
- Question: If there is that much bicycle traffic on it, then it may be something to look at. I don't know how you would do that. Maybe put a trail on it?
- Loren Frazier: The people in this room have a lot better feel for that than we do. We honestly don't go out and count the bicycles and the traffic counters that are out there don't pick up the bicycles.
- Question: It might be that you could add an extra 4-5 feet to the road just for bicycles.
- Loren Frazier: The shoulders that we have would accommodate bicycles. There is an eight-foot shoulder there that will certainly help.
- Question: How much right-of-way are you taking?
- Bill Squires: This design is not final yet folks. We will be taking about 20 feet of right-of-way, which is our best guess at this time but that could change.
- Comment: You're saying 20 feet, but awhile ago you said 5 and 15 feet and then you looked up in your little graph and said it was 10 foot in spots. Well I'm not stupid, I counted five of them, that is 50 feet off my place. That means that you are going to fill that whole cavern in front of my place and it is full of big pines. So they are all going to go. I hate it when somebody acts like I'm stupid.

Bill Squires: I didn't mean to infer that you were stupid, I just looked at it wrong, sir. I'm not going to tell you it is final now because we don't know for sure what we are going to do.

Dave Dreher: Honestly, we are not trying to deceive anybody here, honest to goodness. We've got very, very preliminary ideas about what is going to happen. These are very preliminary ideas of the typical sections. We don't know elevations which will affect the shoulders and the kind of widths they will take. The right-of-way folks, and the right-of-way plans are down the road. They will come out and visit with you. They will be up front with you about what can be done. There are also times and circumstances being what they are, we can sometimes pull some of those back a little bit when it is required. We really can't identify and talk to you about one-on-one problems tonight because we just don't have that kind of detail. The right-of-way folks -- and Moreen is here tonight from our right-of-way section. She and her folks will be visiting with you and they will have better details at a later date.

We have kind of transitioned into a comment and answer period, so let's continue on with that one at a time. That way we can make sure we get all of your comments. If we don't have answers for you tonight, we are trying to record them to make sure that we've gotten all the questions, and we will try and get back to you in some kind of written format or whatever.

Question: How much time is this project going to take and how much are we going to be inconvenienced? Is there going to be a pilot car going back and forth? Will they be closing the road for 3 to 4 hours at a time like they did up the hill? That will impact business here and impact us if we go to the corner store or even getting to our homes. It is going to be a little bit of an imposition.

Bill Squires: There could be times if we are blasting rock where the road will be shut down for a couple of hours at a time.

Question: What about the businesses like the Outpost that depends on a constant flow of traffic?

Bill Squires: We always try and maintain two-way traffic as much as possible. Sometime we have restrictions where we have to put short sections into one-way traffic with pilot cars.

Dave Dreher: There may be short periods of time where things are shut down, but again, depending what the final comes out -- with blasting and so forth. We don't

want you to leave here thinking that there won't be any, because there possibly will but then again there possibly won't. We don't have a firm answer for you. I would love to walk in and be able to tell you did but we don't. But it a distinct possibility. But we try and keep it to a minimum. We try to lessen the impact on businesses as much as we can. There is only so much you can do to build a road and still get it done right. And sometimes those require those kinds of circumstances.

Question: This is more of a statement. It appears that this meeting is about is trying to get as much input as you can as to where problems are. The sense that I get from you and Bill and Loren is that you are trying to solve problems as long as you can identify them. You've said that the Medicine Tree Bridge, for safety egress and ingress, you are going to provide a turn out or provide something there so it is safe. Those areas where somebody is loosing some parking and has a business on the road, you are going to provide or at least find a way to accommodate them. As far as Larry is concerned because he is loosing his berm, because you have done any grade cuts, you don't know where it is, maybe there is going to be an area where you can build a berm in those areas so he is not significantly impacted and still have a safe road. If bicycles are a problem, it appears that by making the road wider that you've solved that problem. I think that for everybody here, no matter what your individual concerns are regarding their own individual property, just make sure those are on the comment board so that you can address those individually.

Question: You have a passing lane that comes right to the edge of our property, there have been several accidents, people in the river etc. You ought to consider that when you have that passing lane.

Dave Dreher: Generally on that curve between 440 and 450?

Question: Yes. You might straighten it out a little more if you add a retaining wall. But are you saying that somebody will come visit each one of us personally before the plans are final so we can actually walk down there and see? Do we have to make and appointment or what?

Moreen Walsh: I think what she is talking about is before design.

Dave Dreher: Right now, you are going to frequently see consultants out there. They are doing a lot of surveying. But nobody is really going to come to you individually.

Question: Well then, how am I going to make my thoughts known?

- Dave Dreher: At meetings like this. That is why we want you here.
- Question: But I don't see anything. How do I know you are going to remember this when you go visit everybody?
- Dave Dreher: We are putting comments up there on the wall and we are also taking notes and recording this meeting. We are doing a whole lot. If you would be willing to jot a few notes on a comment card – all these methods we use to try and pull this together to make a better project for all of us.
- Question: The road is now very, very close to the river right there, even more so than in other places where you are putting in those Gabion walls. Maybe it might be something to look at there?
- Loren Frazier: There have been vehicles in the river right there.
- Question: How do you get these comments to people in reference...?
- Catherine Cox:: We will get these comments to the drafters and engineers so they can look at what is on there and see if there some room to tweak, or move up and down, etc.
- Bill Squires: Regarding a particular location, if you can give us a mile post location to the nearest 10th of a mile, that helps us to know where you're at. Just tell us that you live by so and so.
- Dave Dreher: Just say "a quarter of a mile south of milepost 440" -- that would help. Give us a reference.
- Question: Do you have an approximate start time on this project?
- Dave Dreher: Ready date at this particular time, and this is a rough schedule, is January 2004 and construction is probably 2005 – probably. It will take one construction season or maybe two.
- Loren Frazier: Bridges that are being fixed take longer. If we get going early in the spring, and I don't know when Spring comes up here – that seems to vary from year-to-year, we should be looking at a season and half. Probably two seasons.
- Question: When we get this all done and the speed limit increases, do we pick up all the dead animals?

Loren Frazier: Would you like them? (laughter)

Answer: No!

Question: Legally, how close can a residence be to the highway? What is the legal limit? You are going to take quite a bit of our property and remove quite a few of our buildings, and I'm wondering what is the legal limit from the highway? Do you know what it is?

Bill Squires: If you're on your own property and you're not overhanging on our right-of-way or parking on our right-of-way...

Question: You're talking about just a few feet from the highway? You can be that close?

Bill Squires: Not the highway itself, the right-of-way line -- which is typically 50 feet on each side of the centerline. There are a few places where it is out to 70 feet or more.

Question: So you're talking 50 feet?

Bill Squires: Yes, 50 feet on each side of the existing centerline. What is there right now? The standard right now is 80 feet on each side, but that may be changing. I'd say right now we are looking at the construction limits from the top of the cut to the fill slope plus 10 feet.

Dave Dreher: Currently the road is 50 feet from the centerline. The standard that we try to build to and it is done with a whole lot of guidance, is 80 feet so that would change it somewhat. Then that may shift somewhat -- so that is why we say we don't know what the right-of-way limits are going to be. Because if the road is higher and you have to slope it out further to make it safe, then it extends it out a little further. Or if it is lower I'm not here to snow you. Right now it is 50 feet. They like to have 80 feet. It may be something more or something slightly less than that. As I said before, there are times, under certain extreme circumstances, we can pull that back a little bit. That is negotiated with the right-of-way folks as we get into the process.

Question: Ok, let's give them 80 feet. Does that come from the centerline?

Dave Dreher: That would be from the proposed new centerline.

Question: How do you determine what that is going to be?

Dave Dreher: Right at this moment we can not.

Question: Is that 80 feet from.....

Dave Dreher: From the centerline. It is to the property we own. What we try to buy is from the centerline to 80 feet, as a general standard. Now again, I tried to explain that can change a little bit depending on the elevation of the road. But 80 feet is what we try to get. That is what we own. Now the road doesn't go that far. That is where our fence would be.

Question: Construction and structures, how close can they be?

Dave Dreher: As long as it is on your property it is ok.

Loren Frazier: As far as we are concerned, if it is that far (indicating just a few inches), it is fine with us.

Comment: But that isn't the point. The highway is that close.

Comment: My question is from the location of the new highway, is it 80 feet from centerline?

Loren Frazier: Yes, but that can vary. It can be narrower in some places. That is kind of an average.

Question: You mentioned a fence. Are you talking about limited access through here? What is the fence?

Question: Could you reveal a little bit what the impacts will be to the river and how much, in general, of that Gabion wall are you talking about? Someone was mentioning to me that some of the natural river course would be taken.

Bill Squires: We will be affecting some wetlands and there may be some opportunities to mitigate those wetlands and make some enhancements to those old channels. These are just generalities, we have no specifics.

Question: How do you define wetlands?

Rob Harris: He explained the criteria for defining wetlands: (1) inaudible. (2)...We have to have some sort of hydrological source be it a tributary creek. An isolated depression that fills with groundwater or whatever, because we

have to show that water accesses the site. (3) The third thing is called hydrospheric or wetland vegetation. Those three things.

Question: Are you familiar with the section between Conner and Robbins Gulch on the eastside of the highway?

Rob Harris: Yes, I've lived here 25 years. That is one of the better wetlands on the project.

Question: Rob, are you going to have responsibility of doing the wetland analysis along the right-of-way?

Rob Harris: It is done already. It was done this last year. It was done before the fire came this year and it is all in field form right now. It hasn't been written up into a biological report, but it is all gathered and sitting there. We are in the process of figuring out what the wetland impacts area. Once we know that, we will know what kind of mitigation we need. On the project, those of you who have lived down here, a lot of questions have arisen as to whether it could work or not. Physically it could work -- that is the piece of old river channel right in front of Aztec Ranch. Even though it has been wet for the last 20 years, it is so sterile and overgrazed, etc., that it is not a jurisdictional wetland just because it is so depleted. So there are opportunities on the project to mitigate on site. That would be highly preferable to having it done somewhere else in the community and applied to this project. So hopefully that will happen. So we have identified some of those areas and, as you've said, channel restoration from the 1937 construction where it channelized so many portions of the river and created astra-stream velocities and what not, there are some opportunities to mitigate that. Whether it is within the budget and scope is beyond me. But I'm just saying it could be done.

Question: In your consideration of the highway construction, which has the stronger lead precedence -- moving away from a wetland toward the river or visa-versa.

Rob Harris: Probably visa-versa, at this present time because of the bull trout issue, we would probably have more of a problem putting a road into the river further than we would going into a wetland and having to replace it.

Now with these wetlands, as you know, if they are lost or if they loose three acres, MDT is required to create three new acres that applies to this project. Preferably on this project itself -- if we can. So that is the preference. With the recent listing of bull trout, though there are very few in the river,

issues of water quality are taking precedent. So they are saying we can mitigate wetlands, we can't mitigate loss of river habitat and bull trout habitat.

Dave Dreher: Did that help? Obviously, we don't have firm answers on length of Gabion, etc. right now.

Rob Harris: Yes.

Question: Does this project go as far south as the big horn sheep herd.

Rob Harris: No, this runs basically down to the end of the section yard, just this side of Warm Springs Creek. That is where this one cuts off. The other one is within the Sula North and South project. But one thing I would like to mention with both projects we are looking into is finding out if there could be some alternative to the salt mix in our road sanding procedure. We are finding that our salt mix when mixed with sands, and pond melt is next to the highway, attracts animals particularly big horn sheep, and Mark Traxler is aware of this and it is being discussed at MDT.

Loren Frazier: We are experimenting right now with a couple of different mixes and we are going to see how they work this winter. The reason we put salt in with the sand is so the pile doesn't freeze up and we can get it out into piles without getting chunks. Anyway, we are experimenting with a couple of different products and we'll see how they go this winter.

Rob Harris: We are kind of in a unique situation up here in that we are so confined especially in the Sula section where it is within the canyon. Anything we are putting on the road whether it is chemical deicer or salt, is going to have some ramifications with water quality in the river. Everything is just too closely intertwined because the highway is so juxtaposed to the river. So hopefully we can find a solution to that.

Question: In that nine-mile section, how many passing lanes are there? Three? Those designated to be passing lanes, are they all going to be four lanes or will there be three lanes?

Bill Squires: Right now it is just these two sections we are looking at – milepost 17 to 17.8 and milepost 21 to 22.3. We are looking at four lanes. These are just ideas.

- Dave Dreher: We are looking at two sections. That doesn't mean that both would make it and that doesn't mean that either would make it. But we are looking at two and we would like to hear your comments about those.
- Comment: Wouldn't a three-lane be preferable?
- Bill Squires: We could put one as a northbound passing lane and the other one put a southbound passing lane.
- Question: What are the chances of nixing the whole thing and designating this as a scenic route and leaving it like it is?
- Dave Dreher: We have no right to designate scenic routes at MDT.
- Bill Squires: A "no build" for the project is always an alternative.
- Dave Dreher: A "no build" for the project but putting signs up designating this as a scenic route is not an alternative.
- Question: Who would we see about that?
- Dave Dreher: I hate to say it, but talk to your legislator who is here tonight.
- Comment: Well, I think he's already heard what I said.
- Question: What is the forecasted growth of traffic patterns on this highway? What are the averages and percentages of growth over the next 20 years? Are we looking at having more and more traffic all the time and what are the percentages?
- Dave Dreher: I think you can look at this chart and see what we are forecasting.
- Bill Squires: The latest traffic count we took this year is 1,370 cars per day as averaged over the whole year. By summertime it is probably 40-50% higher than that. At our projected design in 2004 you are looking at 1,480, and twenty years after that in 2024 you are looking at 2,200. That is a 2% annual growth rate.
- Question: Is the growth of the valley as a percentage of increase in population we've had in the valley spreading up this way?
- Dave Dreher: That is based on the models that we have for traffic projection increase. That is the best we've got right now.

Question: When you design a road now, how far into the future do you design for and what do you expect the capacity to be?

Loren Frazier: 20 years.

Question: So right now, you are based on that capacity for twenty years down the road?

Loren Frazier: Yes.

Question: I was told something today about the Lewis and Clark Celebration in 2005 and that it will totally fill the traffic on this road, so if the construction starts in 2005, is this going to be a real nightmare?

Dave Dreher: That is something that we've been made aware of. I know Loren and I have talked about it and he is going to look at. One of the things that constrain us is budget --when the money is available and when it isn't. So you might have to do some shifting and playing, but it is something that he is going to look at. We did talk about that today.

Loren Frazier: That is a problem we run into statewide because Lewis and Clark traveled most of this state. Some communities thought that it was going to be started in 2002 or 2003, and others in 2004 or 2005, so they have a 5-year window. If we elected to not do anything on the Lewis and Clark Trail statewide, we would pretty much shut down the whole program. So it is a concern and it is something we are looking at. Right now, we don't really have a good handle on how many people are going to come – are they all going to come at once, or come for a week. Are they going to trickle in through the summer? Are they going to come for a 6-year period? It's a really good question. It is something we are looking at as a department and figure out what we can do. But is kind of a nebulous monster at this point in time.

Question: For the benefit of the group would you explain why you do a 20-year design?

Loren Frazier: Normally when we look at things, we look at a 20-year life cycle. That is about how long we can expect a roadway to last. When we build it, when we put pavement down, there is weathering, traffic, and other things that wear on that pavement. Usually in the life of a highway, we will build it and then in 10-11 years we will have to do a minor rehab – surface repair. But generally we get 20 years of life or better out of a highway. Another

thing, it is pretty hard to project much farther out than that with any kind of a reasonable accuracy. When we start getting 20 years out – it depends on what growth factor you use and there are a lot of other things to consider. Our statistical forecasting tells us that 20 years is about a reasonable period we can project to. Usually a highway after 20 years is getting to the end of its life and its is time to fix it or do something.

Dave Dreher: Obviously, one of the problems we face is budget constraints and because of that you don't see us reconstructing every road in Montana every 20 years because we just don't have the money.

Loren Frazier: This road was actually built in 1936-37 and we've been patching it together.

Question: That brings up a question I have. Why was this section of road identified as one that has to be replaced? Is it because it has had a significant increase in accidents, or traffic, or we need to spend so much money in this area? I'm just kind of curious for my own benefit as to why this particular road has been selected? I lived up West Fork for a while and they put millions of dollars up beyond Painted Rocks which doesn't go anywhere, so why have we decided we want to do this here? I'm not saying it is not justifiable, I'm just sort of curious as to what criteria you use?

Loren Frazier: I don't know about Painted Rocks because it was done before I showed up here last February. When we look at a road like this, I can say this one was built in ...it is old and we spend a lot of maintenance money down here to try and keep it together. It is a narrow road with steep drop offs on each side. We do have accident history here – accident problems. If you go off those slopes it is likely that you will roll or turn upside down and land in the river. The alignment – it is a windy alignment on a narrow road with steep shoulders with no room to retreat. It is a 1937 design -- they designed for a few slow cars and horse trains in those days. We've outgrown it and safety and increased maintenance costs over time.

Dave Dreher: One thing you should know also is that the project has been in the works since 1987 in one form or another and for a number of reasons not completed. It has been identified but for a number of circumstances beyond a whole lot of people's control, it has not been completed and we are at a point now where, hopefully, it looks like we can complete it.

Question: As speed increases, which it evidently will, what is going to happen to our wildlife? What measures of prevention are you going to take to prevent worse accidents from happening? Since the speed is going to increase

obviously the casualties will increase. What are you going to do about the unnecessary death of wildlife?

Loren Frazier: With a little bit of shoulder room it allows the driver a little bit more room on the road to maneuver around things. The other thing is that we have straightened out some of these curves. Some of these curves are designed where you can't really see around them now. With the improvements you will be able to see around them a little further and can see something in time to stop.

Rob Harris: Admittedly when you straighten some of these curves, you have better sight distance. If you have wider shoulders, you have more maneuverability. The down side to that is that when you build a facility like that, we tend to drive faster – I think all of us do. An example, the sister project that the residents are familiar with is the Sula project in the canyon portion between Warm Springs Creek and the Sula store. It is very windy in there – a lot of corner speeds are posted at 45 mph and 50 mph. We have a lot of sheep that come down on the highway, but yet we kill very few sheep in there. To my knowledge, we haven't killed bicyclists in there either and that is the worst part of the canyon. What I'm saying is that it is a hazard for those things to be on the road -- whether you're a bicyclist or a sheep. The very nature of the curves make you travel slower give you reaction time to avoid a sheep that is on the road that is licking salt in a puddle. We've all had that happen – we've come around a corner and found game smack in the middle of the road up there, but there is time to negotiate it and slow down and avoid it. So it is kind of a tough one – the maneuverability is great and the site distance is great, but if those allow motorists to violate the speed limit we will probably find ourselves with more of a loss.

Loren Frazier: Let me just counter that. The Bonner east project that we built – we widened the shoulders and there is a resident sheep population that seems to come out and hang out on the shoulder of the road but we get relatively few sheep hits there. We've got that shoulder maneuverability. It's got enough curvature in it that people are driving 50-55 mph but they are able to see them and slow down. The only problem we've had is that people have been rear-ended when stopping to take a picture of them standing on the road.

Question: I've run into people sitting on the road stopped to take a picture -- Not just pictures of deer or sheep, but pictures of the scenery. Again it goes into the bicycle issue of people being brain dead. People are stupid and they do stupid things!

- Dave Dreher: One of the things we've done and I don't know what the considerations are, but in a couple of places we've put some pull-outs that have allowed folks to do things like that.
- Comment: But then if you put a shoulder on, you're going to have fifteen as many people stop.
- Dave Dreher: Ok, we're just talking about some of the things we've done and some things that are possible and some things that aren't possible. We're here to hear your comments about that.
- Question: What would it take to make this highway a scenic highway and lower the speed limit? This is one of the most beautiful stretches of river and road you can find.
- Dave Dreher: The State of Montana has no provision for identifying and naming scenic highways. The federal government has some but the State of Montana has no scenic designation.
- Loren Frazier: As I travel western Montana and in my last job I worked down in southwest Montana in Butte, and I think it is neat that in almost every public meeting I go to, that the people say "this is a scenic highway." I heard it in Gallatin Canyon, I heard it last night in Bigfork, I heard it a couple of weeks ago up north of Whitefish, I heard it down in Ennis, and Twin Bridges. I just want to share that with everybody – I think it is neat that we live in a state where people feel like that.
- Dave Dreher: That is one of the reasons we live here. What road wouldn't you designate? So it makes it very difficult.
- Question: Regarding the animals on the road. When I drive that road, I know there are animals on it and I know where the sheep are going to be most of time, and I know there are some standard crossing areas. Can we be sure, when we do this project, that is taken into consideration? Possibly some additional signage can be added saying this is a wildlife area. The problem is that when people come in from Idaho, half the time they come through here about 90 mph.
- Loren Frazier: There may be some things we can do.
- Rob Harris: The only point I wanted to make on the wildlife crossings – we can identify an area of high crossing and ask MDT to sign it, and if it's a serious enough one we can ask them to have alternating flashing lights. Regarding

Bighorn sheep on the Sula section, we've put in a provision that if the sheep kill starts becoming elevated with the new highway and we find that instead of killing one or two sheep a year we are killing four or five, that they sign it with alternating yellow flashing lights. The same thing could possibly be done with the Conner section from the Outpost north --I think all of you know that from the Outpost north there is about a one-mile section where whitetails are prevalent and we're probably going to have some kill clusters there. If it gets that bad then put up some type of signing if only for liability purposes. However, a lot of times signing doesn't do much good, but still it is posted for the new cars coming through.

Question: Why do we have to wait until something happens before we do something that is needed? I would rather see us put up some signage before we kill these animals.

Answer: The problem is that we have so many suspicious places in Montana. When we did the Hamilton to Lolo study, we had a multitude of crossing points -- as many as 30-40-50. We couldn't identify that within this ½ mile we had a very high incidence of whitetail crossing.

Comment: Down here we do though.

Answer: The thing is that they occur every ½ mile down the road and if you get too many signs, then the people start tuning them out. It's like traffic lights -- traffic lights go in because they have identified a high accident area. So we have to document that it is occurring and then we can go in and do something. That is the way it is done.

Dave Dreher: It is certainly something that we are going to take a look at. We will work with them and try and do everything we can to make sure we do the best we can.

Question: If you are going to have to take someone's property, what is the process that is done? How does that work?

Moreen Walsh: Regarding the right-of-way, first of all the design has to be completed on the project. Then we identify how much property we are going to acquire and what the impacts will be on specific properties. We then go out and do an appraisal to determine fair market value and make an offer and negotiate with the landowner.

Question: So that means the current market value on what property is going for in an area?

- Moreen Walsh: Generally, it is based on comparable sales in the area. Yes.
- Loren Frazier: Regarding the animal crossing issue – if we can identify some areas where crossings are likely, there are some techniques that have been developed for crossings that we would be willing to look at. Possibly try some under-crossings or something like that. Also regarding Bighorn sheep -- by Thompson Falls we have a fairly substantial sign program with flashing lights and pullouts and that has actually made a difference with those sheep. There are several huge, huge signs with flashing lights on them that are hinged and our maintenance people put them up when sheep are there and take them down when sheep aren't around -- that way they command respect rather than people seeing them when nothing is there and ignoring them. That program has worked fairly well.
- Dave Dreher: We certainly are looking at wildlife issues. We've had some other mitigation effects that we've taken and Loren is certainly more than willing to look at them.
- Loren Frazier: Yes, we've tried some experimental things on some other projects and hopefully they will work and we can use them other places.
- Question: Given the hardships a lot of people suffered because of the fire here, this is going to be a further hardship as we cut through people's properties. What are the chances if a lot of people get together and sign a petition of keeping this road just the way it is and just maintaining it? Could we do that for a couple of more years? It seems to me that we are just inviting more traffic, more problems. The more we accommodate it, the more it is going to happen.
- Dave Dreher: One of the problems we face that Loren talked about was the number of maintenance dollars that go into a road once it has gone beyond it's life.
- Loren Frazier: More important than that is the safety issues, the steep slopes, and things. If we didn't go through with a full-blown reconstruction, we would be looking at safety improvements that might overlap.
- Comment: But you would think with the slower speed, safety would be more prevalent. With straightening out of road, safety is going to go out the window somewhat as we pick up the speeds.
- Loren Frazier: The analogy is use since I grew up with horses – you get to looking at highway stuff and I compare them to horses. You have a colt that you are

training and you work with it and there are things about it that you really like and other things you don't like about it. I haven't seen a perfect horse that does everything you want yet. So you start weighing the things you like vs. the things you don't like, then you decide if you're going to keep him or sell him. Highways are like that. There are benefits to doing some things, but I've never seen a pure 100% benefit yet. You're trying to weigh positives and negatives.

Comment: It is just that these hardships are coming a little bit too close together.

Loren Frazier: One thing that I will bring up on this job that really bothers me is that I am charged with the duty to look out to for the health and well-being of the public and my people. We have all those steep banks with the river and it doesn't matter how slow you go down those, you are probably going to wind up upside down. Three or four years ago we had a section man turn his truck upside down while plowing snow – he wasn't moving very fast but he slid on the ice and turned upside down.

Question: What about guardrails on this section?

Loren Frazier: Guardrails generally are not on the slate but we will be putting some up along the bank. One of the problems we have with the existing road right now is that it is so narrow. If we put up a guardrail right now we are creating a bigger problem than we are solving because you will be pushing everybody to the middle of a 22-foot road. That is narrower than we like to be on a highway. So if we did that, we would probably start having people clip each other, sideswipes, and head-on's – so that is why the guardrail isn't up.

Bill Squires: There is a stretch under the Sula project where we put guardrails – it keeps you on the road but in some of the sections you feel pretty confined with guardrails. At that time it was justified because the Sula project had some safety measures where guardrails were needed but it really created problems down there. That is what we would be looking at in this section where there are accident clusters, we will be putting guardrails in the narrow sections (showing map).

Question: Instead of dancing around the issue, being that this is a federal highway isn't there some obligation to the federal government as far as upgrading this highway because it is a main federal thoroughfare? So it is like going over the Locksaw Scenic River secondary road, etc. Isn't that really the issue here?

- Loren Frazier: It's not really the issue. It is one of the issues but the main one we look at on something like this is maintenance and safety. But you're correct that it is a designated national highway by the U.S. Congress as a highway of national concern as a trade route. The federal government leaves the highways up to the state – it is our choice on what we do with them. There are standards if we reconstruct it. But because it is a national highway, that is an issue but it is not the driving issue here – it is not THE issue or the PRIMARY issue on this project.
- Question: Is there a possibility to garner some funds out of this project to go towards public transit on this section of road? I'm thinking of the ski season and the safety factor. With folks driving from Hamilton, providing a daily bus route during that time of year when there is heavy snow and ice.
- Dave Dreher: Based on funding and how it is identified and how it is broken down, no we can't take dollars out of this specific project and turn it over to transit. However, under the current funding bill (T-21), a percentage of the total dollars goes to transit. Now, how that is spent is based on a whole lot of issues.
- Loren Frazier: I know enough about this to be dangerous! I can tell you how it works in Missoula. There are transit dollars and the Department of Transportation does a substantial amount of funding for the Missoula Transit Authority and Mr. TMA (which is the ride-share program in the Bitterroot). We do fund them a substantial amount. That about sums up the total transit money for the Missoula area. It is split up statewide – transit money goes to the Metropolitan Planning organizations which are Great Falls, Billings and Missoula at this time. I believe Butte was getting some also.
- Dave Dreher: Most of the transit dollars go to urban areas because there is enough ridership there to justify it. When you look at a rural area, ridership is way down so you are spending a lot of dollars for a few riders vs. a more urban area where you can spend that same dollar and have a lot more people who are riding it.
- Loren Frazier: But it is definitely worth exploring. It was good comment.
- Question: On the easement areas – how are those treated? Are they just hydroseeded? What happens to those areas? Do you do anything with them? You obviously do a cut on a slope and grade it out, do you hydroseed that area?
- Loren Frazier: The standard practice is to salvage topsoil, strip it off, build the road, and put the top soil back on and then we generally seed. In areas where we can

drill seed, we like to drill seed because the seed gets better germination and grows a little faster. Areas that are too steep to drill seed, we hydroseed or broadcast seed.

Question: Where are you going to get this topsoil with all this (inaudible)

Loren Frazier: That is a good question. If there is not much here to salvage, then we won't salvage that much. It goes project-by-project. We do try and seed and re-vegetate. In some areas of special concern, we have tried to transplant the Willows, and we've planted trees in some areas.

Question: So there is something that can be done? Looking at the plans, this could be a very beautiful road and safe for the residence.

Comment: There is a specifically nice tree that was far enough on the bank to not interfere with the road.

Dave Dreher: As long as it is not a safety issue with somebody going off the road, and if it is far enough off the road to not create a traffic hazard if somebody goes into the ditch, then it is possible to leave it.

Question: How about utilities?

Dave Dreher: Utilities do have a right to be there under Montana state law.

Question: What is the follow up public input process for this EA? When do we respond to plans?

Catherine Cox: We will do it in the form of a newsletter summarizing everybody's comments and concerns and reiterating our contact information so you can get your concerns and issues to us. Everything you send to me, I'll get to MDT so they have an idea of what's out there. We will hold another public open house like this one before the draft EA is finalized and released. Then when the draft EA is released, there will be a formal comment period.

Loren Frazier: There will be one more public meeting and one more public hearing, then the formal comment period on the EA.

Dave Dreher: I would like to thank you for coming. We got a whole lot of good information. I know that Catherine has been taking notes madly as well as others, and we have had the recorder going so it has been very beneficial. We appreciate it. Please feel free to take a comment sheet and send us something if you think of it later. We would love to have it. If you have

comments ready, leave them with us now. We want information from you so that we can make this work best for everybody.

Meeting ended at 8:30 p.m.

CONNER NORTH & SOUTH PROJECT LAND OWNER MEETING

**Thursday, February 27, 2003
Darby Community Clubhouse
Darby, MT**

A Land Owner Informational Meeting for the Conner North & South Project was held in Darby, MT February 27, 2003, at the Darby Community Clubhouse. Twenty-two (22) people attended the Public Meeting (sign in sheets attached). A full transcript of the meeting follows:

OPENING

Dwane Kailey, MDT: I'm Dwane Kailey, Engineering Services Supervisor in Missoula with the Montana Department of Transportation. I would like to tell you what we are planning on talking about tonight. The main purpose is basically restoring a few meanders along the East Fork of the Bitterroot.

I would like to introduce some people here with us tonight: Loran Frazier, Missoula District Administrator. Diana Bell, Environmental Project Manager for Carter Burgess. She is preparing the document for this project. Jeanette Lostracco, Carter Burgess. Chris Clancy, Fisheries Biologist for Montana Fish, Wildlife and Parks. Jeff Ryan, Water Quality Specialist, Montana Department of Environmental Quality. Scott Jackson, Biologist for U.S. Fish and Wildlife Service. Doug McDonald, Permit Processor for the Corp of Engineers. Susan Kilcrease, Environmental Services for MDT. Craig Genzlinger, Operations Engineer with Federal Highway Administration.

First, Diana Bell from Carter Burgess will explain what we have going on and what we plan to do with the meanders. After she speaks Chris Clancy will explain the importance of this project and why this is so necessary and why we would like to do this.

A couple of items of order – to maintain order, if you have a question or comment please raise your hand, we are taping this meeting so we will let you use the microphone if you have a question or comment. We tape all our meetings because your comments are very important to us and we don't want to miss those comments so we tape record them. That way we can go back and review them later on if we need to. We have comment forms in the back so feel free to fill those out if you don't want to speak. You can either mail them back to us in a couple of weeks or just leave them on the table and we will grab them after the meeting.

I would like to explain a couple of things about the job and where we are at this time. First of all, we are doing our preliminary design right now. We are also working on preparing the environmental document. We hope to have the environmental document out later this summer for draft review and possibly have the public hearing later this summer as well.

In the process of working with you and talking with some of you, a question came up regarding the Medicine Tree and whether or not we were going to have the highway cross the river on the opposite side of where it is today. I would like to clear that up. We are not doing that. We are going to maintain the highway on the existing alignment. It will stay on the east side of the river at this time. We are not going to cross over.

We are not planning on discussing the majority of the job tonight but if you have questions please feel free to come up after the meeting. I did bring a set of plans and we can talk with you one-on-one about certain items. This meeting is mainly about the meander restoration.

Some other items I would like to clear up regarding the meander restoration – we have discussed it and we will not and we cannot use the process of Eminent Domain to take your property. This is simply good will – if you guys are willing to do this, we will discuss it with you. If you are not willing, we won't pursue it. So don't feel like we are going to come in and take your land – it is completely up to you guys. You have to be willing.

One other item I would like to mention. This is basically a preliminary informational meeting. All we are trying to do is find out who is willing to explore this option a little further. We are not trying to sign up anybody tonight. We are not trying to say this is our hard-set design. We are just basically trying to find out who is willing to do it. A lot of our design layout is very preliminary. We haven't spent a whole lot of money and wasted a whole lot of time designing something that may not be an option. We just wanted to come to you guys and see if this is something you really want to do or if this is something you are willing to talk about. With that I will turn it over to Diana Bell who will discuss what we plan on doing.

Diana Bell, Carter Burgess. A couple of other things – we want to ask you to sign up on a sheet after the meeting if you are interested in talking with us sometime in the near future. We will come out to your property and talk with you if you are interested in this proposal. So if you are interested, as you leave please sign up for that.

The way this proposal has come about – As part of the environmental coordination process, we work with the resource and permitting agencies to figure out all the potential impacts of the highway improvements – to water quality, wildlife, fisheries, wetlands, and all the natural resources. There are permits and approvals the project needs to get before it can go to construction. Out of that process came this concept of looking at restoring one of the river meanders that had been cut off during the original highway construction.

One of the primary issues has been trying to find opportunities to move the road away from the river and keep that separation. We put together a study to look at ways to avoid and minimize impacts to the stream and this idea of restoring one of the river meanders came about. We looked at twelve different historical meanders along the corridor that could possibly be restored. We looked at different factors such as how much additional length would be gained to the river

by restoring one of the meanders, what would that cost, and what would be the additional wildlife or river habitat created from the meander proposal. We came up with six sites that were feasible. Three of the sites were not feasible to reconnect to the river because of the different elevations of the current river channel and the historic channel. So we put together a very conceptual layout of where the river meander could be located. We would like to explore with you what the opportunities would be for doing that with your property. Some of the meanders have four or five landowners on each of the sites, so we would need to work with all of you to get some consensus and get your level of interest on doing that.

Chris Clancy is going to explain some more about the fishery benefits and why this is a good thing from a natural resource standpoint.

Chris Clancy, MFWP. I will talk a little about why these crazy guys think this is a good idea. I am going to talk from the resource perspective and why it is a good thing for the river. I'm going to touch on a few things that if I were a landowner living along that property I would want to know something about. I'm sure I won't be able to cover all of them.

This is not a specific meander (referring to graphic) but typically back in 1939 or 1940 when this highway was constructed, it was easier and cheaper to straighten it. When you had a meander you just cut it off and kept going with the highway. It was just cheaper and easier and kept things straighter that way. It worked well for highways but it doesn't really work well for rivers and fish and some of the natural resources. This reach of river, to my recollection between Warm Springs and Conner, is just short of a mile-and-a-half shorter than it was back in 1939. So for example, this would be where the river is running today and this is an old meander cut off and here is Highway 93.

Of course the concept we are bringing up is really neat from a resource perspective and positive from a fish perspective and largely from a wildlife perspective. I'm not going to get into the wildlife perspective because I'm not a wildlife biologist. Putting the river over here would pick up more length of stream to begin with. There are other issues also. When a river is straightened like this, it down cuts. There is a classification scheme for stream channels that classifies them based on their gradient, their elevations, their shapes, and that sort of thing. When you straighten out a channel like this (referring to graphic), you get deeply incised down cuts. So as you drive along the highway on those straightened sections, you see they are very deep, the riparian area or the stream bank is quite a bit higher and even during floods they don't really get up to any kind of flood plain. They stay within a single channel and are basically kind of a long gully. A natural channel that is meandering is different than that. The channel is actually right up at the elevation of the flood plain or just below it just a few feet. So when a river floods it floods over this area. So when a channel is dug in here (referring to graphic), the ground is much closer in relationship to the channel here than the ground over here is. That allows for much more lush growth of vegetation because the water is higher. So you have nice riparian vegetation in here, you get more natural hydrology going on and natural deposition of gravels and growth of

riparian vegetation. So you get a more natural functional channel from a stream standpoint and riparian growth. It is real hard to get good riparian growth other than right down at the riverbank in here (referring to graphic). In here you will get a much more lush vegetation in a lot of areas and it offers a lot more benefits for riparian dependent species – small birds and mammals. From a fish standpoint it offers more length of river because you've created more river.

A second thing you get is when a stream is bending like this and you've got riparian vegetation, brush and trees, it tends to form a pool on the outside of that area. So you have a channel that is shallow on the inside, maybe a gravel bar, and as you get out here (referring to graphic) it gets deeper and it sort of pools. Anyone who fishes knows that when you are walking up this channel on this side you are casting over here as the water is coming down because that is where the fish hang. So it provides a lot better shoreline habitat right up against the bank than this side. There will be fish in here. The East Fork actually is still a pretty good fishery even with the channelization – there are a lot of nice fish in it. But you are going to see more fish and better fish habitat in this type of channel than you are in this type of channel (referring to graphic). So from a fish standpoint this is a real benefit.

In the short term these are a real mess. When you move a stream, it is pretty ugly. In the last couple of years they did reactivate a meander between Warm Springs and Sula. This is sort of the same concept. That was a situation where there was a straightened channel and they put it back into an old channel. I think the pick up was something like 900 feet longer. For the long run term from a fisheries standpoint we feel good about that. It also tends to be good from a wildlife standpoint. That was on public land so there weren't private land issues involved where folks had development. All the rest of these are on private land and the issues are a lot more difficult. There is development in here, there are things people have that they don't want to lose. So these meanders are more problematic from that standpoint. That is why we wanted to talk to you about it. Like we say, this is voluntary. If you don't want to do it, it is not going to happen. It is that simple.

Another thing, this is expensive. Each of these would require two bridges. You would have to put a bridge here and a bridge here (referring to graphic). Those two bridges cost \$1.5 million. It also requires going in and rebuilding this channel. Most of these have filled in to some extent, some have ponds on them, and some are very shallow and just can't carry the river. So in a situation like that you have to go to a natural section of the river and basically measure the floodplain height and depth and a lot of engineering is done, then you come down here and copy that on your new channel. Then you have the capacity and basically the function of a natural stream channel. This area may need a lot of rebuilding or not. It depends on what condition it is in. That is sort of the concept.

Another issue I would bring up is stream access. In Montana if the public can get access to a piece of stream, they have the right to go up and use that without the permission of the adjacent landowner as long as they stay within the high water mark. When floaters float the East Fork

typically they are in high water during June and part of July. Once the Salmon Fly hatch drops out, you don't see as many floaters but you do see a lot of floaters wading and fishing up and down the East Fork all summer long. They have the right to do that. For example, this is highway right-of-way here (referring to graphic) and they can go down and fish and wade up and down but they can't go outside the high water mark without permission of the landowner. The high water mark is basically not the highest area ever flooded by the river, it is what the average flood elevation is. Typically it is where the willows sort of end – after that you are out of the high water mark and unless you have permission of the landowner, you don't have a right to go up there.

The Stream Access Law classifies streams in Montana as Class I (big rivers) and Class II (smaller rivers and creeks). The East Fork is a Class II stream. If anyone is interested I brought some brochures that explain what the public has a right to do on Class II streams. For example, they can walk up that creek and fish and they can float it and stay within the high water mark. There is not a whole lot more they can do. They can't camp even within the high water marks. They can't drive a four-wheeler. They can't set up a duck blind. There are a variety of things they can't do. You are allowed more leeway with a Class I stream but with a Class II like this is ... I can give you the brochure if you are interested.

Another issue is the flood plain. Just recently the county put together a floodplain map that shows the 100-year flood plain. The 100-year flood plain is broken into two categories (1) a flood fringe and (2) a flood way. The floodway is where the water is moving during a 100-year flood, and the flood fringe is where the water is standing. In state law through county regulations, there are restrictions on what you can do within that flood plain. If the river were moved over here then the flood plain regulations play over here because you would now be in the 100-year flood plain with the restrictions. Now most of them are fairly common sense – you can't build a home there. So if you had plans ... let's say you had a meander here and you thought it would be kind of neat to have the river over there, but you wanted to build a home there, you couldn't do that if the channel were moved.

I'm not going to be discouraging because I really want people to want to do this, but I'm just trying to tell you some of the things I see. I see a lot of benefits for landowners also. I would love to have the river running through my place – for property values and for things people are looking for when they move here. I'm just trying to think of some of the issues.

Water rights. I don't think there are a lot of major water rights like diversions coming out of the East Fork. I imagine people have some small water rights for water pumps and that sort of thing. If you had a water right down here (referring to graphic) and they moved the river to here, you would have to go through some sort of change process to legally move your water right over to here. Or if you were using it here (referring to graphic) on some ground and the river moves to here, it may not work. There are potential problems in a lot of places. If you have a cabin over here and the river moves to here, then you don't have a cabin anymore. Or you may have a cabin,

but you don't have the river any more. Now these are all site specific and we would have to go out and look at it and talk about it. Some of the potentials are that you could leave the cabin there and still have the wetlands in here (referring to graphic), potentially you could have a pond in here but the river would go over here. So it is not like a 100% thing – if the river goes over here then you would have a dry channel and that is the end of it. There is potential. I'm not saying it would happen but there is potential for doing things in these channels to make them more attractive than just a filled area. They can have wetlands and ponds and that sort of thing.

I think I covered most of the main things. Basically the habitat in this scenario is better for a lot of reasons than the habitat over here (referring to graphic). It is not terrible. We have electro-fished some of these channel sections and we do see better fish habitat in the bends. There is still fish in here but it is just not as high a quality as you would see in these channels.

Q: (Loran Frazier) You talk about adding stream length. If you add stream length, and correct me if I'm wrong, that basically it is a benefit to fish. Would more river length mean more fish?

A: (Chris Clancy) That is a good question. From a fisheries standpoint, this is an opportunity to create river to some extent. It is likely you are going to have more fish per linear foot in this channel than in this channel (referring to graphic). Then add on top of that the fact that you have more river or a longer river. So some of these where you pick up 1000 feet ... we have populations counts in here. There are several hundred maybe close to 1,000 trout per mile in the East Fork. I would guess somewhere in the 600 to 700 range. So if you pick up 1,000 feet of river then multiply that out and you will come up with how many more fish you would get. There is a definite fisheries benefit.

Most of the resource people here are pretty supportive of this. There was a smaller project similar to this done up on Camp Creek. When they did the work up by the Ranger Station at Sula, MDT moved close to two miles of Camp Creek. Camp Creek was running straight along the highway and they moved it over and put it into a meandering channel. That was very strongly supported by the landowners and the resource agencies and others put a lot money into that to make it work. It is a pretty widely recognized as a positive thing to do.

One other thing I want to mention. When this was modified back in the 40's, we had a channel that sort of goes like this (demonstrating) going down the valley. Portions of it are straightened like this (demonstrating). You can imagine rolling a marble down an incline that goes like that. The marble goes a certain speed, but when it goes to this spot it goes fast. When you straighten out a stream, there is a lot of erosion of the stream channel because it has been overly steepened. It used to be at a lesser grade so it caused a lot of erosion. So you get a lot of gravel movement in here because it is trying to get that length back. It is trying to flatten itself out so you get a lot of gravel movement. Then it goes down here and causes deposition. So when this was done it had to cause a fair amount of instability throughout the East Fork for years. Probably a lot of that has

stabilized by now ... this was a long time ago. But you do have reaches where it is straight then down below you will notice that it kind of opens up and you have a lot of gravel. That is because gravel can't deposit in there. On the bend, it deposits naturally. It deposits on the inside and there is sort of natural progression of gravel – a wash or a bank will erode and go down and deposit here. This interrupts that. It shoots through and you tend to get quite a bit of gravel deposition and unstable channels downstream. It is pretty classic and you see it all over the place. Every 1,000 feet of river we can pick up is a benefit. This is probably our last chance on the East Fork to pick this up. Once it is done, it is done and if we don't pick these up they will remain as they are and we will never get the chance again.

That is why we are here today asking if you are interested. We are basically interested and if you don't think this is a totally harebrain idea, or you don't think there is any good reason to do this on your place, then you can leave and you won't hear from us again. If you have some neighbors who disagree, maybe you could talk and see what you think. Some of these have more than one landowner. If you think it is worth exploring, we would be happy to come out and kick the dirt around with you and look at it and talk about possibilities. That is more or less where we are – we are just seeing if anyone on these meanders is interested in talking to us. The ones that are most attractive are the ones where you get the most length of pick up. The ones where you get 100 feet or less, it is kind of hard to justify spending that kind of money. So the more bang for the buck, the better. Numbers 1, 4, and 5 are the ones that physically look like there is the most opportunity to pick up more stream length. Those would have the highest priority but anyone here that wants us to come out and talk about it, we would be willing to do that.

QUESTIONS/COMMENTS

Q: (Chip Lindenlaub) Meander #9. Chris said that it took a while after they diverted the stream for it to clear up again and initially it was a mess. How many years are you talking about for that? Also in addition to the cost of the bridges, I realize it depends on the meander, but what is the cost of making the meander again and setting it up as a riverbed?

A: (Chris Clancy) The estimate is in the report. I don't have them off the top of my head. There are figures in the report for what it would cost to do that for each of these. It is going to vary depending on ... and they are pretty much guesses but it is expensive. It would give you some idea. The funding for this would be government money. MDT has money; our department has money that we will match to that. It would be our job to find the money. If we walked out of here and three of the meanders said they wanted to do this, we would be hard pressed to find the money to do that. It would be nice to have that problem. It would be contingent upon us to find the funding to make it happen.

A: (Diana Bell) The work including two bridges, the flood plain and river reconstruction, all the grading, the earthwork, and revegetation – the very conceptual cost estimate that we have is about \$2,000 to \$3,000 per linear foot of river restored.

Q: (Chip Lindenlaub) That includes the bridges?

A: (Diana Bell) Yes, that is based on three different examples that we costed out for the meanders 1, 4 and 5 and comparing it to the Sula cost.

Q: (Smut Warren) What is going to happen to the highway? Are you guys involved in the highway or is this strictly the river?

A: (Chris Clancy) Today we are just talking about the meanders. There are a lot of different issues with the highway. We were involved in permitting on the highway, but you might talk to Dwane about that after the meeting if you have specific questions about the highway.

Q: (Smut Warren) We have already talked to him a little bit. This is a lot of the people's concern. Say they go with this project, then where is all the money coming from for the highway and how wide are they going to do the highway?

A: (Chris Clancy) I'm not sure what the answer is to that.

A: (Dwane Kailey) I guess predominantly we would like to keep the meeting basically on the meanders. Your highway questions are definitely valid and we can talk about that after the meeting. We would like to come back after the Draft EA has been put out and have a public meeting where we can address everybody that will be impacted by the highway and everybody who wants to come and we will address those questions then, if that is ok.

Q: () Smut are you thinking that if they spent money on this, they wouldn't be able to do something with the highway? Is that what you are thinking? For example, if we spent a dollar on a bridge, then we wouldn't have the money available for something else?

A: (Smut Warren) Yes.

Q: (Chris Clancy) The other question you asked was how long it would take to do this. I was talking about when they straightened the river out and it took quite a few years for it to settle down. It can take a long time and many years for it to finally figure out what it is going to do. Even today, there are still some unstable areas. But you are talking about the work of doing it in the short term? For example, if they were to do this meander, they would go in and rebuild this meander before they put any water into it. They go in and shape it and turn it into a river channel without water. There is really no sediment going into the river during the construction. The sediment happens when you finally put the river in. It typically doesn't last as long as you think. My experience has been on these things ... I wasn't here when they finally did put it in up above, but...

- A: (Jeff Ryan, DEQ) I wasn't involved in that one, but we've actually done a water quality sampling on other projects involving reconstructing channels. The first flush of sediment occurs and is over within about the first six hours. Again, it depends on river size. Most of the sediment is deposited in the first three or four hundred feet downstream of where you put it in. It is only deposited until the first high flow event in the spring. Turbidity can last for up to twelve to twenty-four hours but it is light turbidity and that too dissipates. So in a matter of a couple of days all short-term effects are gone and not even visible.
- A: (Chris Clancy) The amount of sediments that come down here in the short-term are not deleterious. The fish can handle it just fine. After what they have been through for the last couple of years up on the East Fork, a little turbidity from one of these won't hurt them. They can handle it just fine. All resource folks consider that sort of thing a minor issue. Getting the river back is well worth a day of turbidity.
- Q: (Larry Blocker) I'm in section 4. I'm not part of this because I didn't receive a letter but my neighbor got one and we are pretty close. You are not putting it back in the original riverbed. I want to know something about that. There is talk about a cost of a bridge. The bridge is going in regardless of whether it is 50 feet down the road or where you have it proposed. The cost of the bridge is there regardless. I want to know why you are not putting it in the original bed. Let's be real here, you are talking about a hell of a price in value on my property by not putting it back in the original place, you see what I'm saying? You put the river where it hooks the corner of my property, my value is going up and I'm a realist. You can save all the fish you want I don't care. It don't bother me at all. I'm not an environmentalist but I am a realist and when I go to put a for sale sign out there, it is going through the roof on the price. Ok?
- A: (Loran Frazier) I want to get back to Smut's question earlier about the roadway width. The roadway width is about 40 feet wide, two twelve-foot lanes with eight-foot shoulders. It will follow pretty much the existing alignment that is there now. So the new highway will be a little wider, it will have some shoulders on it, and guardrail where the steep slopes are now. I don't know if that answers your question.
- Q: (Smut Warren) How much land do you want on each side of the road?
- A: (Loran Frazier) That is a good question and that is going to vary from spot to spot. If you have a spot we can sure talk after the meeting and go over that. It depends on the hill, how high the road is up, and how far we have to fill out.
- Q: (Smut Warren) What are you going to do around Fishing Creek?
- A: (Loran Frazier) I don't know and we would have to dig out the plans to find out.

Q: (John Robinson, MDT) This gentleman had two questions: (1) why don't the plans past his property show that we are actually going to re-run the river in the original riverbed? Can anyone respond to that right now?

A: (Diana Bell) We have a copy of the report that looked at the different meanders. In looking at the conceptual layout, we used a firm of hydrologists whose specialty was river restoration. So in the aerial that shows the layout here (referring to graphic) I can see what you are saying with the historical meander there. I can't answer your question but we can look into it and get back to you if you would leave your name.

Q: (Larry Blocker) We are talking about a couple of ... (inaudible) ...

A: (John Robinson) And they will. That is the purpose of the meeting. From the photographs and the information they had, they thought they were putting it in the original bed.

Q: (Larry Blocker) That photograph is pretty obvious that the river ain't where it was. I'm not totally stupid. I'm being real. People don't like the way I talk but I tell it like it is. That is the way I am and if you can't accept it, that is your problem not mine.

A: (Chris Clancy) I wouldn't get too hung up about the details of where the blue lines are...

Q: (Larry Blocker) I do get hung up on the details because I didn't receive a letter to come to this meeting buddy.

A: (Chris Clancy) What I'm trying to say is that might not be exactly where it would go. Our notion is, if this is something you might be interested in, maybe the blue line would end up somewhere different. Do you want us to come out and meet with you and talk about it?

Q: (Larry Blocker) I think the gentlemen is standing right there, yes. You bet I want somebody to come out and talk to me about it.

A: (Diana Bell) I can clarify that. The way we approached this was to start setting up individual meetings. We contacted a couple of landowners and began to set up one-on-one meetings to come out to their home. Then when we started to research the corridor to include the six meander sites and saw how many landowners there were for these six different locations, we came up with close to 50 landowners with half of them out-of-state. There were too many people to meet with in a timely manner so we thought we would have a landowner meeting and share this information with everyone so you could hear the same background information on this. So we were looking at the landowners who were directly affected by the proposed construction. We know there are people up-stream and down-stream that would be interested and have an opinion, but we were really trying to focus on directly affected landowners. So we were not intentionally leaving anyone out, we just had a large

group of people that we were trying to coordinate on this issue. We are certainly interested in hearing what you have to say and exploring the idea of how it affects your property.

Q: (Larry Blocker) I would just like to see it put back in the original place. I'm being honest it is strictly a money thing for me. I don't care how many fish you save. Everyone I catch I eat.

Q: (John Robinson) So you would like the river moved?

A: (Larry Blocker) You are talking about a couple hundred thousand dollars in price on my property. You bet!

A: (Dwane Kailey) We will definitely look into that. Not a problem, Larry.

Q: (Tami Morgan) I live next door to Larry. I just wanted to find out if the meander would widen the width of the river?

A: (Chris Clancy) I'll do my best to answer that. I'm a fish biologist talking about hydrology, which is pretty dangerous territory. Yes it most likely would. When these channels were straightened out and cut down and incised, it made it is pretty confined and pretty narrow. A lot of water moves through it like a garden hose. A channel that is meandering like this tends to be broader. It is not a lot wider but it is definitely wider. Particularly during flood, you've got a much larger area covered by that. That is the beauty of it and that is why it is providing so much habitat— there is a much larger area exposed to water and you get better growth of vegetation. But definitely you have a channel that is wider. When you see designs for these types of channels, typically they will show you a straight section and then a bend section and you kind of see a typical cross section design. The bend section is typically wider and shaped a little differently. There is more likelihood of flooding coming across the top. I'm not sure about icing or what the pros and cons would be. But yes, it would be a wider channel.

Q: (Chip Lindenlaub) I realize it depends on the stream velocity down from the meander. In our particular case there is a head gate and an irrigation ditch very shortly after where the meander would come back into the river. What would be the impact on that? In other words, if the meander made it so there wasn't any water coming in there, is somebody going to help out with that? What would be the impact on the flood potential and the erosion of the riverbank down stream? Are there any guarantees that if the meander changes the river significantly and destroys somebody's bank because you have a longer downhill straight shot, then what happens?

A: (Chris Clancy) Conceptually, the velocity of the water coming down here is slower than the water coming down here (referring to graphic). You should see generally slower water

because it is covering a larger area and isn't graded as much. Nobody is going to guarantee anything. We know more and more about river function all the time, but as far as what is going to exactly happen ... there are general ideas about what will generally happen because there has been enough study done, but what will specifically happen you never know. If a tree gets jammed in the right place and you get a logjam ... you can't guarantee anything.

You said you have a head gate on this channel? So it is somewhere downstream of where the new channel would come in and meet where it used to be. That would definitely be a consideration. In many of these you wouldn't just stop here as far as your stream restructuring. You would go some ways downstream to a logical point so it would come back to the river properly. So if there is a head gate nearby, it is an issue that would have to be dealt with. That is real typical on these kinds of things. Head gates are special circumstances where you've got to figure out what will work there and give it your best shot.

Q: (John Robinson) Does anybody else have any questions? This is just an informational meeting and we can exchange ideas.

Q: (Dorene Sain) When you talked about all of the parties being affected by a meander change, then would that include the property owners that the river would now move onto their property as well as the property owners that would lose river front?

A: (Chris Clancy) Yes. The folks that live on that straightened stream channel have river right now. If it is moved, they don't have river anymore. You talk about property values and that sort of thing. I look at this river channel and think it should be moved over here, but the guy living over here may not feel that way. So the question we have – is there anything we can do with the channel to make it ... it wouldn't be the main Bitterroot East Fork any more, but are there things we could do with ponds, wetlands, or that sort of thing to make this attractive enough for you to be ok with... maybe some money because of lost property values? I'm not an attorney but this person over here could veto this project just as well as the person over here.

Q: (Dorene Sain) Does the funding already include the purchase or compensation to that owner losing riverfront?

A: (Chris Clancy) No. Until we know if there is even interest ... if someone says, no absolutely not, it is not going to happen, it is not worth even getting into it. But if there is some interest and it looks like this could happen, then basically it is incumbent upon us to try and find the money. There is a lot of money available for this type of thing these days. I'm pretty good at getting six figures but when you start talking seven figures it gets pretty darn tough. But we are at the point now – if it is not a possibility, then fine, we will walk away from it. But if you think it is a possibility and there is something that may make it work, then let's talk about it. If it is too expensive and we can't come up with the money, then it isn't going to

happen. We have sources of money we can go after to try and make it happen. The money that I'm familiar with through Fish, Wildlife and Parks can be used for some things that aren't directly obvious. For example, if you wanted to move your cabin 100 feet, we could probably use money from my agency because it helps make this work. The money doesn't necessarily just have to be spent on the stream. We would argue that if we don't move the cabin then the project won't happen so then let's move it. We can't really talk details because we don't know if there is any interest. Until we find out if there is interest, then we won't know.

Q: (Laura Lindenlaub) Would the meander reconstruction site coincide with the highway project so they are done at the same time so we don't have to undergo two periods of reconstruction?

A: (Dwane Kailey) Yes, if we do the meander project, it will be done during the highway project.

Q: (John Robinson) Any other comments? Are there any other questions at all?

Q: (Unidentified) If you are going to go ahead and do this, what timeframe are we looking at? When will it get started?

A: (Dwane Kailey) Basically we are looking at the fact that we don't have funding until after about 2007. We are assuming it will take two seasons for construction.

Q: (Rich Townsend) I am just curious, I think the meander reconstruction/reconnection is really cool but my place is a real old one, it is hundreds of years old. I have an old time picture that Birdie Lord took and there is no river there. So how does that work? I'm worried about the other section that might be a stable part of the river and I think that is pretty cool too. It might be the only part that hasn't been channelized or moved.

Q: (John Robinson) So you think the plan, according to this, is fairly accurate?

A: (Rich Townsend) No it is not accurate. I'm not sure the river was there 10-12 years ago, but in the last 50-100 years it hasn't been there. I have an old picture of my property when it was just an old wagon road.

Q: (John Robinson) Do you think creating the meanders is a good idea over all?

A: (Rich Townsend) Absolutely. I wish more of them were involved. It is too bad it is just one because I think the meander proposal is just wonderful. It is a one-shot deal. Once this highway is through here it is all over with. We will never have a chance again.

Q: (Chris Clancy) Are you talking about the one below your mom's place? I don't think that is one of these.

A: (Rich Townsend) No, south of the Rocky Knob.

CLOSING

I would like to thank everybody for coming tonight and feel free to ask any questions you have after the meeting. We do have a set of plans up here. If you have any questions about the highway, please feel free to come on up and ask. Also make sure you signed up and if not make sure you do before you leave.